# **Table of Contents**

| Model Detail                          |    |
|---------------------------------------|----|
| EMS Domain Analysis Model             | 6  |
| EMS DAM Behavioral Model              | 7  |
| EMS DAM Use Cases                     |    |
| 1.0 EMS Agency Administration         | 8  |
| 1.1 Maintain EMS Agency Profile       | 9  |
| 1.2 Certify EMS Agency                | 10 |
| 1.3 Monitor Agency Performance        | 10 |
| 2.0 EMS Response Administration       | 11 |
| 2.1 Provide EMS Incident Notification |    |
| 2.2 Assess EMS Incident Notice        | 13 |
| 2.3 Dispatch EMS Personnel            | 13 |
| 3.0 EMS Patient Encounter             |    |
| 3.1 Assess Patient                    | 16 |
| 3.2 Treat Patient                     | 16 |
| 3.3 Provide Medical Oversight         | 17 |
| 4.0 EMS Patient Disposition           |    |
| 4.1 Transport Patient                 | 19 |
| 4.2 Transfer Medical Control          | 19 |
| EMS DAM Activities                    |    |
| 1.0 EMS Agency Administration         | 21 |
| 1.1 Maintain EMS Agency Profile       |    |
| 1.2 Certify EMS Agency                |    |
| 1.3 Monitor EMS Agency Performance    |    |
| 2.0 EMS Response Admininstration      | 24 |
| 2.1 Provide EMS Incident Notification | 25 |
| 2.2 Access EMS Incident Notice        |    |
| 2.3 Dispatch EMS Personnel            | 26 |
| 3.0 EMS Patient Encounter             |    |
| 3.1 Assess Patient Condition          | 28 |
| 3.2 Treat Patient                     | 29 |
| 3.3 Provide Medical Oversight         | 30 |
| 4.0 EMS Patient Disposition           | 31 |
| 4.1 Transport Patient                 | 31 |
| 4.2 Transfer Medical Control          |    |
| EMS DAM Use Case Actors               | 33 |
| EMS Agency                            | 33 |
| EMS Agency Response Crew              |    |
| EMS Incident Notifier                 | 36 |
| Healthcare Provider                   | 36 |
| Patient                               | 37 |
| PatientEncounterBystander             |    |
| Public Safety Dispatcher              |    |

| Regulator   |    |
|---|----|
| EMS DAM Interactions                                      |    |
| EMS DAM Static Information Model                          |    |
| Agency Demographic SIM                                    |    |
| Agency Demographic SIM: Agency Demographics Class Diagram |    |
| D01 Agency  |    |
| Agency  |    |
| AgencyAnnualStatistic                                     |    |
| AgencyServiceArea   | 49 |
| ServiceType   |    |
| D02 AgencyContact   |    |
| AgencyContact   |    |
| D03 AgencyMedicalDirector                                 | 54 |
| AgencyMedicalDirector                                     |    |
| D04 AgencyConfiguration                                   |    |
| AgencyConfiguration                                       |    |
| BillingStatus   |    |
| EMDVendor   |    |
| EMSCertificationLevel                                     |    |
| EMSUnitCallSign   |    |
| ServedFacility  |    |
| Available Services  |    |
| AvailableMedication                                       |    |
| AvailableProcedure  |    |
| AvailableTreatmentProtocol                                |    |
| MedicationAuthorizedCertificationLevel                    |    |
| ProtocolAuthorizedCertificationLevel                      |    |
| D05 Station   |    |
| Station   |    |
| D06 Vehicle   |    |
| AgencyVehicle   |    |
| AgencyVehicleCrew   |    |
| AnnualVehicleUsage  |    |
| D07 EMSPersonnel  |    |
| Certification   |    |
| EMSPersonnel  |    |
| EMSService  |    |
| Employment  |    |
| D09 Device  |    |
| Device  |    |
| EMS SIM   |    |
| EMS SIM : EMS SIM Class Diagram                           |    |
| E01_EMS Patient Care Report                               |    |
| EMSSoftware   |    |
| PatientCareReport   |    |
| E02_UnitAgencyInformation                                 | 94 |

| DelayOccurance                | 95  |
|-------------------------------|-----|
| DispatchedUnit                | 96  |
| VehicleOdometerReading        | 99  |
| E04_RespondingEMSCrew         | 100 |
| RespondingEMSCrewMember       |     |
| E05 ResponseTime              |     |
| ResponseTime                  |     |
| E06 Patient                   |     |
| DriverLicense                 |     |
| Patient                       |     |
| PatientAge                    |     |
| E07_Billing                   |     |
| Insurer                       |     |
| PatientEmployment             |     |
| PatientEncounterBilling       |     |
| PatientRelative               |     |
| PatientService                | _   |
| E08_Scene                     |     |
| EMSIncidentLocation           |     |
| E09 Situation                 |     |
| ChiefComplaint                |     |
| EMSSituationAssessment        |     |
| PriorCare                     |     |
| SecondaryComplaint            |     |
| E10_SituationTrauma           |     |
| TraumaAssessment              |     |
| TraumaVehicleAssessment       |     |
| E11_CPRSituation              | 130 |
| CardiacArrestAssessment       |     |
| E12_MedicalHistory            | 134 |
| CurrentMedication             |     |
| CurrentMedicationDose         | 136 |
| ImmunizationHistory           | 137 |
| PatientMedicalHistory         |     |
| PrimaryPractitioner           |     |
| E14_VitalAssessment           |     |
| BloodPressure                 | 142 |
| VitalAssessment               | 143 |
| E15_InjuryAssessment          | 145 |
| InjuryAssessment              |     |
| E16_PatientAssessment         |     |
| PatientAssessment             | 148 |
| PatientAssessmentDetail       | 149 |
| Information Flow Objects      |     |
| 1.0 EMS Agency Administration |     |
| O01 EMS Agency Profile        |     |

| O02 EMS Agency Certification       | . 157 |
|------------------------------------|-------|
| O03 EMS Performance Measures       | .157  |
| 2.0 EMS Response Administration    | . 158 |
| O04 EMS Incident Notice            | . 159 |
| O05 EMS Incident Notice Assessment |       |
| O06 EMS Dispatch Instructions      |       |
| 3.0 EMS Patient Encounter          |       |
| O07 Patient Condition Assessment   |       |
| O08 Treatment Protocol             |       |
| 4.0 EMS Patient Disposition        |       |
|                                    |       |
| O09 Patient Care Report            |       |
| O10 Patient Care Report            |       |
| LocalDatatypes                     |       |
| LocalDatatype Class Diagram        |       |
| Any                                |       |
| ANY                                |       |
| Addresses                          |       |
| AD                                 |       |
| TEL                                | .176  |
| TEL.EMAIL                          | . 178 |
| TEL.PHONE                          | .178  |
| TEL.URL                            | . 179 |
| Identifiers                        |       |
| CD                                 |       |
| EN.ON                              |       |
| EN.PN                              |       |
| EN.TN                              |       |
|                                    |       |
|                                    |       |
| Logicals                           |       |
| BL                                 |       |
| Quantities                         |       |
| INT                                |       |
| MO                                 |       |
| PQ                                 | . 201 |
| QTY                                | .204  |
| REAL                               | . 209 |
| RTO                                | .211  |
| Strings                            |       |
| SC                                 |       |
| ST                                 |       |
| TimingExpressions                  |       |
| TS                                 |       |
| TS.DATE                            |       |
|                                    |       |
| Enumerations                       |       |
| BodySiteKind                       |       |
| DelayKind                          | . 223 |

| OdometerReadingKind                | 224 |
|------------------------------------|-----|
| ResponseOccuranceKind              | 225 |
| Information Model Sand Box         | 228 |
| Sandbox E18                        | 228 |
| E18_05_0MedicationDosing           | 229 |
| E18_Medication                     | 230 |
| Sandbox E19                        | 232 |
| E19_01_0Procedure                  | 233 |
| E19_InterventionProcedure          | 235 |
| Sandbox E20                        | 237 |
| E20_03_DestinationAddressStructure | 237 |
| E20_Disposition                    | 239 |
| Sandbox E21                        |     |
| E21_18_0CO2                        | 242 |
| E21_MedicalDeviceData              | 243 |
| E23_03_0Waveform                   | 246 |
| Sandbox E22                        | 247 |
| E22_OutcomeLinkage                 | 248 |
| Sandbox E23                        |     |
| E23_09_0ResearchData               |     |
| E23_Miscellaneous                  |     |

# Model Documentation

### **Model Detail**

This document provides a complete overview of all element details. For simpler and more focused reports, simply copy this initial template and turn off the sections not required.

# **EMS Domain Analysis Model**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: Logical View

Detail: Created on 7/15/2009. Last modified on 7/15/2009 GUID: {1E89D854-DB51-4d14-855F-95DF09F09DB9}

# EMS Domain Analysis Model - (Package diagram) Created By: AbdulMalik Shakir on 7/19/2009

*Last Modified:* 8/26/2009

Version: 1.0. Locked: False

GUID: {E7831087-9853-4981-8BC9-63EFF6848391}

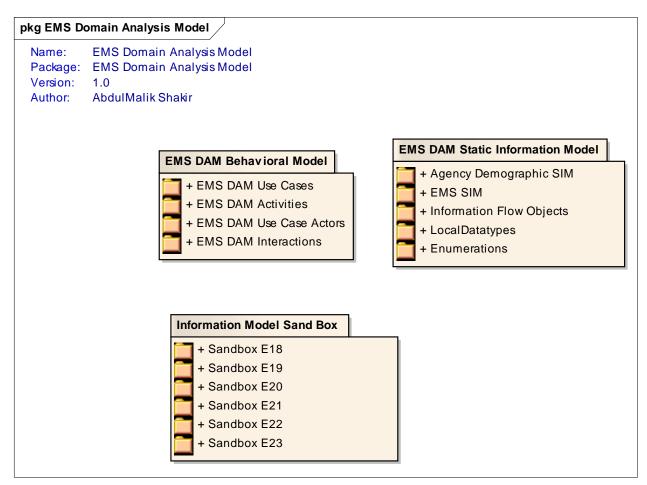


Figure: 1

#### **EMS DAM Behavioral Model**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS Domain Analysis Model

Detail: Created on 8/25/2009. Last modified on 8/25/2009 GUID: {2B2B8C65-13A6-4d4f-B88B-383C6D4E31FC}

# EMS DAM Behavioral Model - (Package diagram) Created By: AbdulMalik Shakir on 7/19/2009

*Last Modified:* 8/25/2009

Version: 1.0. Locked: False

GUID: {BC46877B-3805-441b-8A26-7198B136A7A6}

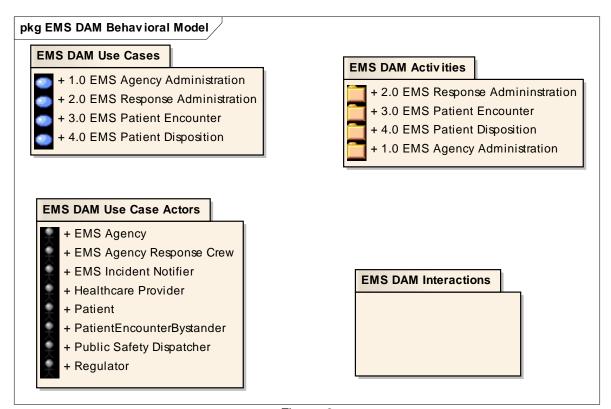


Figure: 2

#### **EMS DAM Use Cases**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Behavioral Model

Detail: Created on 7/19/2009. Last modified on 7/19/2009

GUID: {12B308A2-E9C8-44ad-8EE7-6049E49E79A5}

EMS DAM Use Case Model - (Use Case diagram)
Created By: AbdulMalik Shakir on 7/13/2009

Last Modified: 7/19/2009

Version: 1.0. Locked: False

GUID: {68B2D927-A7BB-42e7-B036-5C41B10BCF9A}

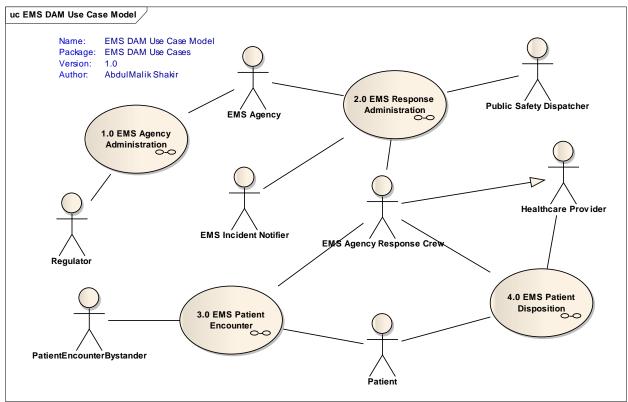


Figure: 3

# 1.0 EMS Agency Administration

Type: <u>UseCase</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Use Cases Keywords:

Detail: Created on 7/13/2009. Last modified on 7/19/2009. GUID: {1473B018-773B-41c7-89B9-88C2B1344943}

The set of activities required to establish an agency, certify the agency, and monitor agency performance.

| Connector          | Source    | Target         | Notes |
|--------------------|-----------|----------------|-------|
| <b>Association</b> | Public    | Public         |       |
| Unspecified        | Regulator | 1.0 EMS Agency |       |
|                    |           | Administration |       |

| Connector                         | Source                                     | Target                                     | Notes |
|-----------------------------------|--|--|-------|
| Realisation Source -> Destination | Public<br>1.0 EMS Agency<br>Administration | Public<br>1.0 EMS Agency<br>Administration |       |
| Association<br>Unspecified        | Public<br>EMS Agency                       | Public<br>1.0 EMS Agency<br>Administration |       |

Use Case diagram: 1.0 EMS Agency Administration

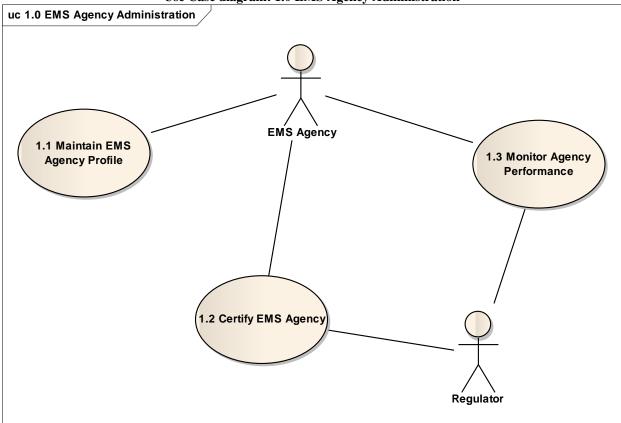


Figure: 4

### 1.1 Maintain EMS Agency Profile

Type: <u>UseCase</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Use Cases Keywords:

Detail: Created on 7/19/2009. Last modified on 7/28/2009. GUID: {4DF8B5F7-DF93-4f35-BAD8-4BB1F07E999E}

The set of activities necessary to maintain an agency profile including personnel, assets (veihicles, stations, devices, etc.), services provided, facilities and service areas served.

#### **Connections**

| Connector          | Source                             | Target     | Notes |
|--------------------|------------------------------------|------------|-------|
| <b>Association</b> | Public                             | Public     |       |
| Unspecified        | 1.1 Maintain EMS<br>Agency Profile | EMS Agency |       |

#### 1.2 Certify EMS Agency

Type: <u>UseCase</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Use Cases Keywords:

*Detail: Created on 7/19/2009. Last modified on 7/19/2009. GUID:* {49C39EF0-4F39-42f4-94C1-F4A3D167C8D6}

The set of activities required to certify an agency including its facilities, personnel, veihicles and other devices.

#### **Connections**

| Connector                  | Source                    | Target                              | Notes |
|----------------------------|---------------------------|-------------------------------------|-------|
| Association                | Public                    | Public                              |       |
| Unspecified                | 1.2 Certify EMS<br>Agency | Regulator                           |       |
| Association<br>Unspecified | Public<br>EMS Agency      | Public<br>1.2 Certify EMS<br>Agency |       |

#### 1.3 Monitor Agency Performance

*Type:* <u>UseCase</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Use Cases Keywords:

Detail: Created on 7/19/2009. Last modified on 7/19/2009. GUID: {5B2C6F99-22FD-4353-A853-5BDD35F60F8D}

The set of activities required to gather relevant statistics and assess the performance of an agency.

| Connector          | Source             | Target             | Notes |
|--------------------|--------------------|--------------------|-------|
| Association        | Public             | Public             |       |
| Unspecified        | EMS Agency         | 1.3 Monitor Agency |       |
|                    |                    | Performance        |       |
|                    |                    |                    |       |
| <b>Association</b> | Public             | Public             |       |
| Unspecified        | 1.3 Monitor Agency | Regulator          |       |
|                    | Performance        |                    |       |

| Connector | Source | Target | Notes |
|-----------|--------|--------|-------|
|           |        |        |       |

# 2.0 EMS Response Administration

Type: <u>UseCase</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Use Cases Keywords:

Detail: Created on 7/13/2009. Last modified on 7/19/2009. GUID: {DF0F2CF0-A635-4150-AE01-008C87C9232E}

The set of activities required to initiate an EMS incident notification, determine an appropriate response, and to dispatch required EMS personnel and assets.

#### **Connections**

| Connector             | Source                       | Target              | Notes |
|-----------------------|------------------------------|---------------------|-------|
| Association           | Public                       | Public              |       |
| Unspecified           | Public Safety                | 2.0 EMS Response    |       |
|                       | Dispatcher                   | Administration      |       |
| Association           | Public                       | Public              |       |
| Unspecified           | <b>EMS Incident Notifier</b> | 2.0 EMS Response    |       |
|                       |                              | Administration      |       |
| Realisation           | Public                       | Public              |       |
| Source -> Destination | 2.0 EMS Response             | 2.0 EMS Response    |       |
|                       | Administration               | Administration      |       |
| Association           | Public                       | Public              |       |
| Unspecified           | EMS Agency                   | 2.0 EMS Response    |       |
| _                     |                              | Administration      |       |
| Association           | Public                       | Public              |       |
| Unspecified           | 2.0 EMS Response             | EMS Agency Response |       |
|                       | Administration               | Crew                |       |
|                       |                              |                     |       |

Use Case diagram: 2.0 EMS Response Administration

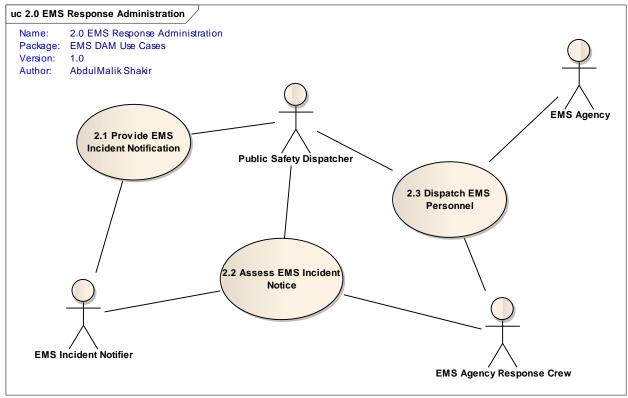


Figure: 5

#### 2.1 Provide EMS Incident Notification

*Type:* <u>UseCase</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Use Cases Keywords:

Detail: Created on 7/19/2009. Last modified on 7/19/2009. GUID: {8DEEF0AF-591F-4860-AD6A-8CECF0ED6A00}

The set of activities required to notify emergency services of an EMS incident. Notification includes alerts issued by devices.

| Connector                  | Source                                       | Target                                | Notes |
|----------------------------|--|---------------------------------------|-------|
| Association<br>Unspecified | Public 2.1 Provide EMS Incident Notification | Public<br>Public Safety<br>Dispatcher |       |
| Association<br>Unspecified | Public 2.1 Provide EMS Incident Notification | Public<br>EMS Incident Notifier       |       |

#### 2.2 Assess EMS Incident Notice

Type: <u>UseCase</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Use Cases Keywords:

Detail: Created on 7/19/2009. Last modified on 7/28/2009. GUID: {0327AA0F-8E29-488a-8BA4-8C9F0F640818}

The set of activities required to evaluate the information provided regarding the reported EMS incident and to determine the appropriate response.

#### **Connections**

| Connector          | Source                | Target              | Notes |
|--------------------|-----------------------|---------------------|-------|
| Association        | Public                | Public              |       |
| Unspecified        | Public Safety         | 2.2 Assess EMS      |       |
|                    | Dispatcher            | Incident Notice     |       |
|                    |                       |                     |       |
| <b>Association</b> | Public                | Public              |       |
| Unspecified        | EMS Incident Notifier | 2.2 Assess EMS      |       |
|                    |                       | Incident Notice     |       |
|                    |                       |                     |       |
| <b>Association</b> | Public                | Public              |       |
| Unspecified        | 2.2 Assess EMS        | EMS Agency Response |       |
|                    | Incident Notice       | Crew                |       |
|                    |                       |                     |       |

#### 2.3 Dispatch EMS Personnel

Type: <u>UseCase</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Use Cases Keywords:

Detail: Created on 7/19/2009. Last modified on 7/19/2009. GUID: {AC1472B3-3F4E-4700-87ED-1A3E97B155BF}

The set of activities required to dispatch required EMS personnel and assets to the scene of an EMS incident.

| Connector     | Source           | Target              | Notes |
|---------------|------------------|---------------------|-------|
| Association   | Public           | Public              |       |
| Unspecified   | 2.3 Dispatch EMS | EMS Agency Response |       |
|               | Personnel        | Crew                |       |
| Association   | Public           | Public              |       |
| Unspecified   | EMS Agency       | 2.3 Dispatch EMS    |       |
|               |                  | Personnel           |       |
| Association   | Public           | Public              |       |
| Unspecified   | Public Safety    | 2.3 Dispatch EMS    |       |
| Chispectifica | Dispatcher       | Personnel           |       |
|               | 2 ispansion      | 1 4100111141        |       |

# 3.0 EMS Patient Encounter

Type: <u>UseCase</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Use Cases Keywords:

*Detail: Created on 7/13/2009. Last modified on 7/19/2009. GUID:* {60102F04-3D9B-4504-A1F6-1998D5E8BF72}

The set of activities required to assess a patient's condition, determine appropriate interventions, and to render treatment.

**Connections** 

| Connector             | Source                 | Target          | Notes |
|-----------------------|------------------------|-----------------|-------|
| Association           | Public                 | Public          |       |
| Unspecified           | EMS Agency Response    | 3.0 EMS Patient |       |
|                       | Crew                   | Encounter       |       |
| Association           | Public                 | Public          |       |
| Unspecified           | PatientEncounterBystan | 3.0 EMS Patient |       |
|                       | der                    | Encounter       |       |
|                       |                        |                 |       |
| <b>Realisation</b>    | Public                 | Public          |       |
| Source -> Destination | 3.0 EMS Patient        | 3.0 EMS Patient |       |
|                       | Encounter              | Encounter       |       |
| Association           | Public                 | Public          |       |
| Unspecified           | Patient                | 3.0 EMS Patient |       |
| Chispectifica         | 1 acioni               | Encounter       |       |
|                       |                        |                 |       |

Use Case diagram: 3.0 EMS Patient Encounter

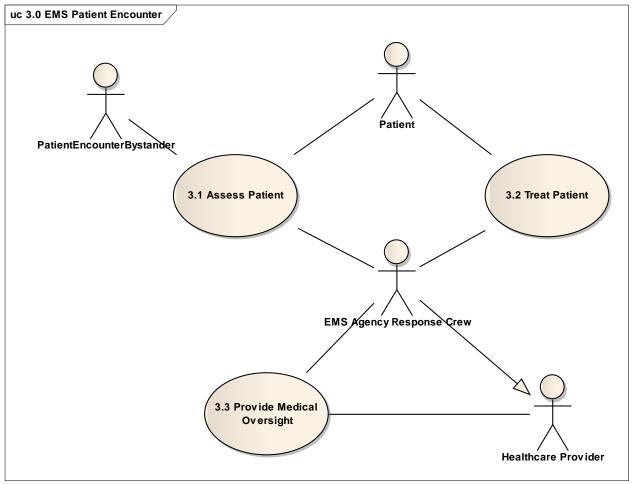


Figure: 6

#### 3.1 Assess Patient

Type: <u>UseCase</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Use Cases Keywords:

Detail: Created on 7/19/2009. Last modified on 7/19/2009. GUID: {C874176B-4765-43b6-8F9D-D3FDCAE8000F}

The set of activities required to evaluate the health condition of the EMS patient and to determine an appropriate course of treatment or other intervention.

| Connector   | Source                     | Target             | Notes |
|-------------|----------------------------|--------------------|-------|
| Association | Public                     | Public             |       |
| Unspecified | PatientEncounterBystan der | 3.1 Assess Patient |       |

| Connector                  | Source                       | Target             | Notes |
|----------------------------|------------------------------|--------------------|-------|
| <b>Association</b>         | Public                       | Public             |       |
| Unspecified                | EMS Agency Response<br>Crew  | 3.1 Assess Patient |       |
| Association<br>Unspecified | Public<br>3.1 Assess Patient | Public<br>Patient  |       |

#### 3.2 Treat Patient

Type: <u>UseCase</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Use Cases Keywords:

Detail: Created on 7/19/2009. Last modified on 7/19/2009. GUID: {A2654313-EF01-47c6-847D-5355AADFADAE}

The set of EMS activities required to address the patient's health conditions.

#### **Connections**

| Connector                  | Source                      | Target                      | Notes |
|----------------------------|-----------------------------|-----------------------------|-------|
| Association                | Public                      | Public                      |       |
| Unspecified                | EMS Agency Response<br>Crew | 3.2 Treat Patient           |       |
| Association<br>Unspecified | Public<br>Patient           | Public<br>3.2 Treat Patient |       |

#### 3.3 Provide Medical Oversight

Type: <u>UseCase</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Use Cases Keywords:

 Detail:
 Created on 7/28/2009. Last modified on 7/28/2009.

 GUID:
 {E5601A57-568A-45f0-9DA0-2FC88EE41770}

| Connector                  | Source                           | Target                                     | Notes |
|----------------------------|----------------------------------|--|-------|
| Association                | Public                           | Public                                     |       |
| Unspecified                | 3.3 Provide Medical<br>Oversight | EMS Agency Response<br>Crew                |       |
| Association<br>Unspecified | Public<br>Healthcare Provider    | Public<br>3.3 Provide Medical<br>Oversight |       |

# 4.0 EMS Patient Disposition

Type: <u>UseCase</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Use Cases Keywords:

*Detail: Created on 7/13/2009. Last modified on 7/19/2009. GUID:* {CAF1FBC0-925E-4ee5-9E64-CDA83D5A978B}

The activities required following interventions provided in response to an EMS incident notification. Includes transporting of patient from the scene and transitioning of medical control.

#### **Connections**

| Connector             | Source              | Target              | Notes |
|-----------------------|---------------------|---------------------|-------|
| Association           | Public              | Public              |       |
| Unspecified           | Patient             | 4.0 EMS Patient     |       |
|                       |                     | Disposition         |       |
| Realisation           | Public              | Public              |       |
| Source -> Destination | 4.0 EMS Patient     | 4.0 EMS Patient     |       |
|                       | Disposition         | Disposition         |       |
|                       |                     |                     |       |
| <u>Association</u>    | Public              | Public              |       |
| Unspecified           | EMS Agency Response | 4.0 EMS Patient     |       |
|                       | Crew                | Disposition         |       |
| Association           | Public              | Public              |       |
| Unspecified           | 4.0 EMS Patient     | Healthcare Provider |       |
| 1                     | Disposition         |                     |       |
|                       |                     |                     |       |

Use Case diagram: 4.0 EMS Patient Disposition

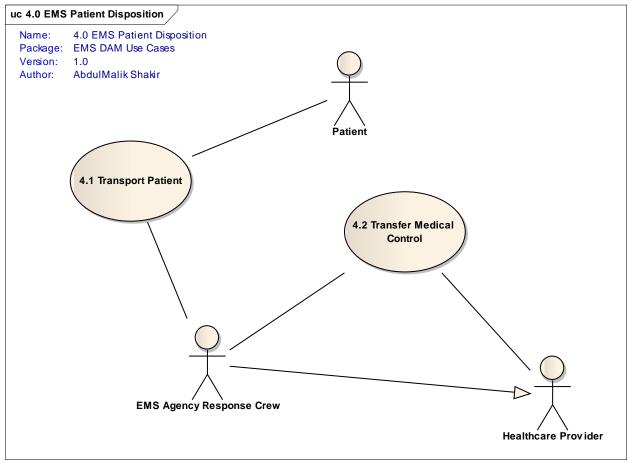


Figure: 7

# **4.1 Transport Patient**

Type: <u>UseCase</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Use Cases Keywords:

 Detail:
 Created on 7/19/2009. Last modified on 7/19/2009.

 GUID:
 {95F119FB-9BC4-499b-BE6B-C6C8B39A628E}

The set of activities required to transport or arrange for transport of the patient from the scene of the EMS incident.

| Connector   | Source                | Target              | Notes |
|-------------|-----------------------|---------------------|-------|
| Association | Public                | Public              |       |
| Unspecified | 4.1 Transport Patient | Patient             |       |
| _           |                       |                     |       |
| Association | Public                | Public              |       |
| Unspecified | 4.1 Transport Patient | EMS Agency Response |       |
|             |                       | Crew                |       |
|             |                       |                     |       |

#### 4.2 Transfer Medical Control

Type: <u>UseCase</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Use Cases Keywords:

*Detail: Created on 7/19/2009. Last modified on 7/19/2009. GUID:* {FE5CE378-9C34-4fd9-B54A-C8C2CE72E123}

The set of activities required to facilitate the relinquish of control from the responding EMS crew to a health care provider.

#### **Connections**

| Connector   | Source              | Target               | Notes |
|-------------|---------------------|----------------------|-------|
| Association | Public              | Public               |       |
| Unspecified | EMS Agency Response | 4.2 Transfer Medical |       |
|             | Crew                | Control              |       |
|             |                     |                      |       |
| Association | Public              | Public               |       |
| Unspecified | Healthcare Provider | 4.2 Transfer Medical |       |
|             |                     | Control              |       |
|             |                     |                      |       |

#### **EMS DAM Activities**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Behavioral Model

Detail: Created on 7/28/2009. Last modified on 7/28/2009 GUID: {70C59AAC-6C42-4155-A84E-E348C186C846}

**EMS DAM Activities** - (Package diagram)

Created By: AbdulMalik Shakir on 7/28/2009

*Last Modified:* 8/24/2009

Version: 1.0. Locked: False

*GUID:* {FE956537-71EC-4d0f-928D-6C355B5E52FD}

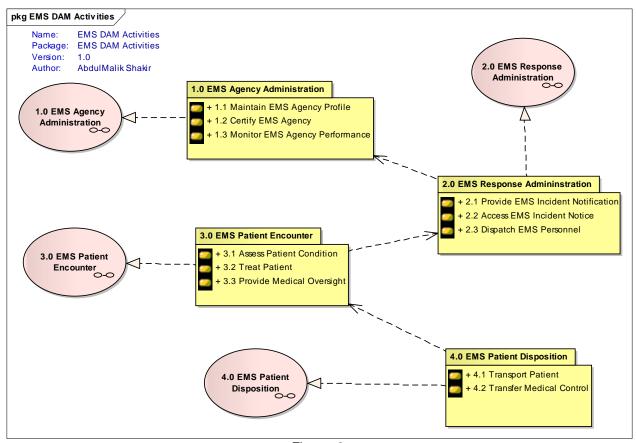


Figure: 8

# 1.0 EMS Agency Administration

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Activities

Detail: Created on 7/19/2009. Last modified on 7/28/2009 GUID: {D8727DDF-1BC0-4b06-B70B-286D07999EE9}

# **1.0 EMS Agency Administration** - (Activity diagram) Created By: AbdulMalik Shakir on 7/19/2009

*Last Modified:* 7/28/2009

Version: 1.0. Locked: False

*GUID*: {51529057-E4E4-44f5-89E4-58B4363D93F6}

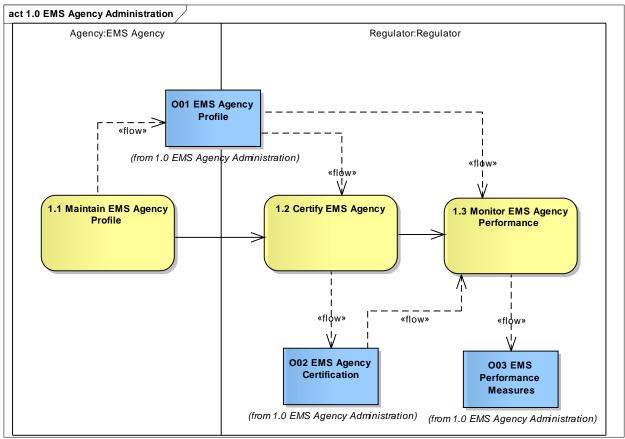


Figure: 9

#### 1.1 Maintain EMS Agency Profile

*Type:* Activity

Status: Proposed. Version 1.0. Phase 1.0.

Package:1.0 EMS Agency AdministrationKeywords:Detail:Created on 7/28/2009. Last modified on 7/28/2009.GUID:{EB3D6E53-DDB4-466c-B5F3-4C2168373C76}

#### **Custom Properties**

- isReadOnly = False
- isSingleExecution = False
- postcondition =
- precondition =
- parameterName =

| Connector               | Source           | Target          | Notes |
|-------------------------|------------------|-----------------|-------|
| ControlFlow             | Public           | Public          |       |
| Source -> Destination   | 1.1 Maintain EMS | 1.2 Certify EMS |       |
|                         | Agency Profile   | Agency          |       |
|                         |                  |                 |       |
| <b>Information Flow</b> | Public           | Public          |       |
| Source -> Destination   | 1.1 Maintain EMS | O01 EMS Agency  |       |
|                         | Agency Profile   | Profile         |       |
|                         |                  |                 |       |

# 1.2 Certify EMS Agency

*Type:* <u>Activity</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package:1.0 EMS Agency Administration Keywords:Detail:Created on 7/28/2009. Last modified on 7/28/2009.GUID:{D70C308A-260D-4052-877B-3AFF98E16FFC}

#### **Custom Properties**

- isReadOnly = False
- isSingleExecution = False
- postcondition =
- precondition =
- parameterName =

| Connector               | Source           | Target             | Notes |
|-------------------------|------------------|--------------------|-------|
| ControlFlow             | Public           | Public             |       |
| Source -> Destination   | 1.1 Maintain EMS | 1.2 Certify EMS    |       |
|                         | Agency Profile   | Agency             |       |
| <b>Information Flow</b> | Public           | Public             |       |
| Source -> Destination   | 1.2 Certify EMS  | O02 EMS Agency     |       |
|                         | Agency           | Certification      |       |
| ControlFlow             | Public           | Public             |       |
| Source -> Destination   | 1.2 Certify EMS  | 1.3 Monitor EMS    |       |
|                         | Agency           | Agency Performance |       |
| Information Flow        | Public           | Public             |       |
| Source -> Destination   | O01 EMS Agency   | 1.2 Certify EMS    |       |
|                         | Profile          | Agency             |       |
|                         |                  |                    |       |

#### 1.3 Monitor EMS Agency Performance

Type: <u>Activity</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: 1.0 EMS Agency Administration Keywords:
Detail: Created on 7/28/2009. Last modified on 7/28/2009.
GUID: {71FBF7FA-DC0C-408f-841D-AF8BED006A20}

#### **Custom Properties**

- isReadOnly = False
- isSingleExecution = False
- postcondition =
- precondition =
- parameterName =

#### **Connections**

| Connector               | Source             | Target              | Notes |
|-------------------------|--------------------|---------------------|-------|
| Information Flow        | Public             | Public              |       |
| Source -> Destination   | O02 EMS Agency     | 1.3 Monitor EMS     |       |
|                         | Certification      | Agency Performance  |       |
| <b>Information Flow</b> | Public             | Public              |       |
| Source -> Destination   | O01 EMS Agency     | 1.3 Monitor EMS     |       |
|                         | Profile            | Agency Performance  |       |
|                         |                    |                     |       |
| Information Flow        | Public             | Public              |       |
| Source -> Destination   | 1.3 Monitor EMS    | O03 EMS Performance |       |
|                         | Agency Performance | Measures            |       |
| ControlFlow             | Public             | Public              |       |
| Source -> Destination   | 1.2 Certify EMS    | 1.3 Monitor EMS     |       |
|                         | Agency             | Agency Performance  |       |
|                         |                    |                     |       |

# 2.0 EMS Response Admininstration

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Activities

Detail: Created on 7/28/2009. Last modified on 7/28/2009
GUID: {2BFC0DD7-27C3-475e-90CF-E0648099AE37}

#### **2.0 EMS Response Admininstration** - (Activity diagram)

Created By: AbdulMalik Shakir on 7/28/2009

*Last Modified:* 8/24/2009

Version: 1.0. Locked: False

*GUID*: {B05F1D36-B72F-4f22-9D75-0AE93FE8C7DD}

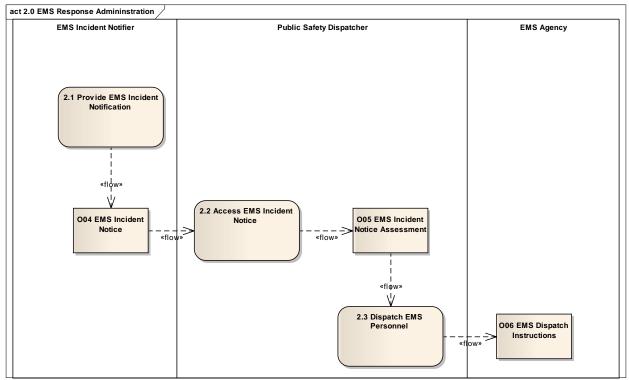


Figure: 10

#### 2.1 Provide EMS Incident Notification

*Type:* Activity

Status: Proposed. Version 1.0. Phase 1.0.

Package:2.0 EMS Response AdministrationKeywords:Detail:Created on 8/24/2009. Last modified on 8/24/2009.GUID:{B10BA5BD-648F-4c39-A82D-413EF41C262E}

#### **Custom Properties**

- isReadOnly = False
- isSingleExecution = False
- postcondition =
- precondition =
- parameterName =

| Connections |        |        |       |  |  |
|-------------|--------|--------|-------|--|--|
| Connector   | Source | Target | Notes |  |  |

| Connector               | Source                | Target           | Notes |
|-------------------------|-----------------------|------------------|-------|
| <b>Information Flow</b> | Public                | Public           |       |
| Source -> Destination   | 2.1 Provide EMS       | O04 EMS Incident |       |
|                         | Incident Notification | Notice           |       |
|                         |                       |                  |       |

#### 2.2 Access EMS Incident Notice

*Type:* Activity

Status: Proposed. Version 1.0. Phase 1.0.

Package:2.0 EMS Response AdministrationKeywords:Detail:Created on 8/24/2009. Last modified on 8/24/2009.GUID:{70D6F01D-D689-403c-9A3D-F50819BE9302}

#### **Custom Properties**

- isReadOnly = False
- isSingleExecution = False
- postcondition =
- precondition =
- parameterName =

#### **Connections**

| Connector               | Source           | Target            | Notes |
|-------------------------|------------------|-------------------|-------|
| <b>Information Flow</b> | Public           | Public            |       |
| Source -> Destination   | 2.2 Access EMS   | O05 EMS Incident  |       |
|                         | Incident Notice  | Notice Assessment |       |
|                         |                  |                   |       |
| <b>Information Flow</b> | Public           | Public            |       |
| Source -> Destination   | O04 EMS Incident | 2.2 Access EMS    |       |
|                         | Notice           | Incident Notice   |       |
|                         |                  |                   |       |

#### 2.3 Dispatch EMS Personnel

*Type:* Activity

Status: Proposed. Version 1.0. Phase 1.0.

Package:2.0 EMS Response AdministrationKeywords:Detail:Created on 8/24/2009. Last modified on 8/24/2009.GUID:{A03366D8-6EA8-42cc-A552-449C609D6F12}

#### **Custom Properties**

#### **Custom Properties**

- isReadOnly = False
- isSingleExecution = False
- postcondition =
- precondition =
- parameterName =

#### **Connections**

| Connector               | Source            | Target           | Notes |
|-------------------------|-------------------|------------------|-------|
| <b>Information Flow</b> | Public            | Public           |       |
| Source -> Destination   | O05 EMS Incident  | 2.3 Dispatch EMS |       |
|                         | Notice Assessment | Personnel        |       |
|                         |                   |                  |       |
| <b>Information Flow</b> | Public            | Public           |       |
| Source -> Destination   | 2.3 Dispatch EMS  | O06 EMS Dispatch |       |
|                         | Personnel         | Instructions     |       |
|                         |                   |                  |       |

#### 3.0 EMS Patient Encounter

*Type:* Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Activities

Detail: Created on 7/28/2009. Last modified on 7/28/2009 GUID: {EC0535E1-3FD2-4d41-811E-B15A78DCE432}

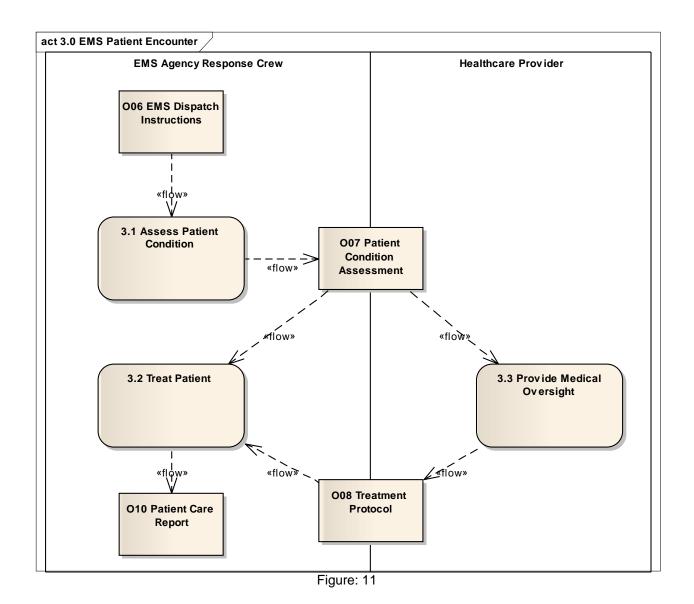
# 3.0 EMS Patient Encounter - (Activity diagram)

Created By: AbdulMalik Shakir on 7/28/2009

*Last Modified:* 8/24/2009

Version: 1.0. Locked: False

GUID: {B635B101-C089-4e91-8ADA-89F311EEC552}



#### **3.1 Assess Patient Condition**

Type: <u>Activity</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: 3.0 EMS Patient Encounter Keywords:

Detail: Created on 8/24/2009. Last modified on 8/24/2009. GUID: {1789DFA1-4694-4009-8F91-5D46221163A8}

#### **Custom Properties**

- isReadOnly = False
- isSingleExecution = False
- postcondition =

#### **Custom Properties**

- precondition =
- parameterName =

#### **Connections**

| Connector               | Source             | Target                | Notes |
|-------------------------|--------------------|-----------------------|-------|
| <b>Information Flow</b> | Public             | Public                |       |
| Source -> Destination   | O06 EMS Dispatch   | 3.1 Assess Patient    |       |
|                         | Instructions       | Condition             |       |
|                         |                    |                       |       |
| <b>Information Flow</b> | Public             | Public                |       |
| Source -> Destination   | 3.1 Assess Patient | O07 Patient Condition |       |
|                         | Condition          | Assessment            |       |
|                         |                    |                       |       |

#### 3.2 Treat Patient

Type: <u>Activity</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: 3.0 EMS Patient Encounter Keywords:

Detail: Created on 8/24/2009. Last modified on 8/24/2009. GUID: {5015B146-A92F-4fcd-9203-02D366F21E15}

### **Custom Properties**

- isReadOnly = False
- isSingleExecution = False
- postcondition =
- precondition =
- $\bullet$  parameterName =

| Connector                              | Source  | Target                               | Notes |
|--|---|--------------------------------------|-------|
| <b>Information Flow</b>                | Public  | Public                               |       |
| Source -> Destination                  | O08 Treatment Protocol                        | 3.2 Treat Patient                    |       |
| Information Flow Source -> Destination | Public<br>O07 Patient Condition<br>Assessment | Public<br>3.2 Treat Patient          |       |
| Information Flow Source -> Destination | Public<br>3.2 Treat Patient                   | Public<br>O10 Patient Care<br>Report |       |

#### 3.3 Provide Medical Oversight

*Type:* Activity

Status: Proposed. Version 1.0. Phase 1.0.

Package: 3.0 EMS Patient Encounter Keywords:

Detail: Created on 8/24/2009. Last modified on 8/24/2009. GUID: {C73AACA0-0475-4af5-B46A-1E08B9970749}

#### **Custom Properties**

• isReadOnly = False

• isSingleExecution = False

• postcondition =

• precondition =

• parameterName =

#### **Connections**

| Connector               | Source                | Target                 | Notes |
|-------------------------|-----------------------|------------------------|-------|
| <b>Information Flow</b> | Public                | Public                 |       |
| Source -> Destination   | O07 Patient Condition | 3.3 Provide Medical    |       |
|                         | Assessment            | Oversight              |       |
|                         |                       |                        |       |
| <b>Information Flow</b> | Public                | Public                 |       |
| Source -> Destination   | 3.3 Provide Medical   | O08 Treatment Protocol |       |
|                         | Oversight             |                        |       |
|                         |                       |                        |       |

# 4.0 EMS Patient Disposition

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Activities

Detail: Created on 7/28/2009. Last modified on 7/28/2009 GUID: {B5F14FAD-7DF6-433c-A0A0-AF289759965C}

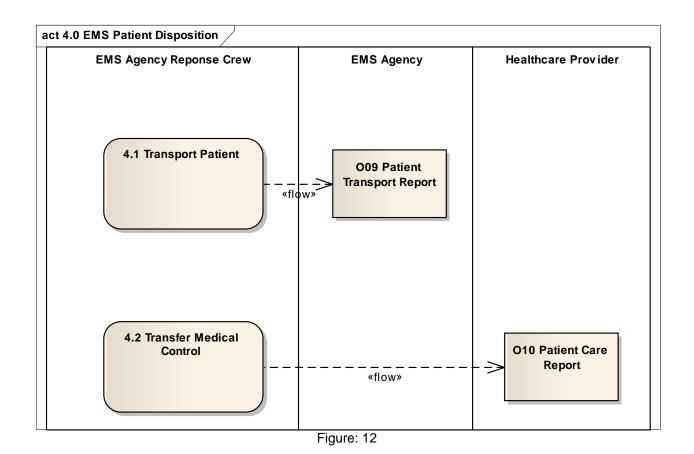
**4.0 EMS Patient Disposition** - (Activity diagram)

Created By: AbdulMalik Shakir on 7/28/2009

*Last Modified:* 8/24/2009

Version: 1.0. Locked: False

*GUID*: {396A0645-3613-49dc-98C4-64E157740FD3}



#### **4.1 Transport Patient**

*Type:* Activity

Status: Proposed. Version 1.0. Phase 1.0.
Package: 4.0 EMS Patient Disposition Keywords:

 Detail:
 Created on 8/24/2009. Last modified on 8/24/2009.

 GUID:
 {DAF4C622-F8DA-4eb1-8CCF-2FC5C2A06F2C}

#### **Custom Properties**

- isReadOnly = False
- isSingleExecution = False
- postcondition =
- precondition =
- parameterName =

| Connector               | Source | Target | Notes |
|-------------------------|--------|--------|-------|
| <b>Information Flow</b> | Public | Public |       |

| Connector             | Source                | Target                | Notes |
|-----------------------|-----------------------|-----------------------|-------|
| Source -> Destination | 4.1 Transport Patient | O09 Patient Transport |       |
|                       |                       | Report                |       |
|                       |                       |                       |       |

#### **4.2 Transfer Medical Control**

*Type:* Activity

Status: Proposed. Version 1.0. Phase 1.0.

Package: 4.0 EMS Patient Disposition Keywords:

Detail: Created on 8/24/2009. Last modified on 8/24/2009. GUID: {82459BF2-C60D-4a04-8164-FE9C340EEF80}

#### **Custom Properties**

- isReadOnly = False
- isSingleExecution = False
- postcondition =
- precondition =
- parameterName =

#### **Connections**

| Connector               | Source               | Target           | Notes |
|-------------------------|----------------------|------------------|-------|
| <b>Information Flow</b> | Public               | Public           |       |
| Source -> Destination   | 4.2 Transfer Medical | O10 Patient Care |       |
|                         | Control              | Report           |       |
|                         |                      | _                |       |

#### **EMS DAM Use Case Actors**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Behavioral Model

Detail: Created on 7/13/2009. Last modified on 7/13/2009 GUID: {8599C1CF-D74C-4f7b-992B-A010CA3D18B5}

EMS DAM Use Case Actors - (Use Case diagram)
Created By: AbdulMalik Shakir on 7/13/2009

*Last Modified:* 7/19/2009

Version: 1.0. Locked: False

*GUID*: {50212A8C-E392-4d74-890B-F3BE898A50B5}

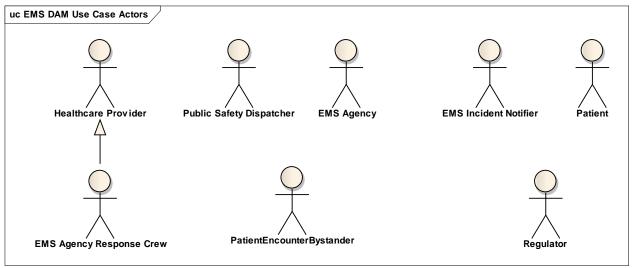


Figure: 13

# **EMS Agency**

Type: <u>Actor</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Use Case Actors Keywords:

 Detail:
 Created on 7/13/2009. Last modified on 7/19/2009.

 GUID:
 {741D2997-2977-45dd-8F4A-0C1A1D2BE5F7}

A permanent or semi-permanent organization responsible for the provision of emergency medical services within a given jurisdiction.

| Connector          | Source         | Target             | Notes |
|--------------------|----------------|--------------------|-------|
| Association        | Public         | Public             |       |
| Unspecified        | EMS Agency     | 2.3 Dispatch EMS   |       |
|                    |                | Personnel          |       |
| Association        | Public         | Public             |       |
| Unspecified        | EMS Agency     | 2.0 EMS Response   |       |
|                    |                | Administration     |       |
| Association        | Public         | Public             |       |
| Unspecified        | EMS Agency     | 1.3 Monitor Agency |       |
| Chispeenred        | Livis rigolicy | Performance        |       |
|                    |                |                    |       |
| <b>Association</b> | Public         | Public             |       |
| Unspecified        | EMS Agency     | 1.2 Certify EMS    |       |
|                    |                | Agency             |       |
| Association        | Public         | Public             |       |
| Unspecified        | EMS Agency     | 1.0 EMS Agency     |       |
|                    | - ,            | Administration     |       |
|                    |                |                    |       |

| Connector          | Source                             | Target     | Notes |
|--------------------|------------------------------------|------------|-------|
| <b>Association</b> | Public                             | Public     |       |
| Unspecified        | 1.1 Maintain EMS<br>Agency Profile | EMS Agency |       |

# EMS Agency Response Crew

Type: <u>Actor</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Use Case Actors Keywords:

Detail: Created on 7/13/2009. Last modified on 7/19/2009. GUID: {A52A225F-9DC8-424f-A549-DD5A1560E11B}

The set of EMS agency personnel and associated agency assets dispatched in reponse to an EMS incident notification.

| Connector      | Source                | Target              | Notes |
|----------------|-----------------------|---------------------|-------|
| Association    | Public                | Public              |       |
| Unspecified    | 2.3 Dispatch EMS      | EMS Agency Response |       |
|                | Personnel             | Crew                |       |
| Association    | Public                | Public              |       |
| Unspecified    | 3.3 Provide Medical   | EMS Agency Response |       |
|                | Oversight             | Crew                |       |
| Association    | Public                | Public              |       |
| Unspecified    | EMS Agency Response   | 3.2 Treat Patient   |       |
|                | Crew                  |                     |       |
| Association    | Public                | Public              |       |
| Unspecified    | EMS Agency Response   | 4.0 EMS Patient     |       |
|                | Crew                  | Disposition         |       |
| Association    | Public                | Public              |       |
| Unspecified    | EMS Agency Response   | 3.1 Assess Patient  |       |
|                | Crew                  |                     |       |
| Association    | Public                | Public              |       |
| Unspecified    | 2.0 EMS Response      | EMS Agency Response |       |
|                | Administration        | Crew                |       |
| Association    | Public                | Public              |       |
| Unspecified    | 4.1 Transport Patient | EMS Agency Response |       |
|                |                       | Crew                |       |
| Association    | Public                | Public              |       |
| Unspecified    | EMS Agency Response   | 3.0 EMS Patient     |       |
|                | Crew                  | Encounter           |       |
| Generalization | Public                | Public              |       |

| Connector                  | Source                                      | Target                                    | Notes |
|----------------------------|---|---|-------|
| Source -> Destination      | EMS Agency Response<br>Crew                 | Healthcare Provider                       |       |
| Association<br>Unspecified | Public<br>EMS Agency Response<br>Crew       | Public<br>4.2 Transfer Medical<br>Control |       |
| Association<br>Unspecified | Public<br>2.2 Assess EMS<br>Incident Notice | Public<br>EMS Agency Response<br>Crew     |       |

#### **EMS Incident Notifier**

*Type:* <u>Actor</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Use Case Actors Keywords:

Detail: Created on 7/13/2009. Last modified on 7/19/2009. GUID: {BBDD7E6D-D22E-412d-B2E7-F9D6A0686648}

An individual, group, or device that notifies a public safety dispatcher of an incident requiring a EMS response.

#### **Connections**

| Connector   | Source                                   | Target                            | Notes |
|-------------|--|-----------------------------------|-------|
| Association | Public                                   | Public                            |       |
| Unspecified | <b>EMS Incident Notifier</b>             | 2.0 EMS Response                  |       |
|             |  | Administration                    |       |
| Association | Public                                   | Public                            |       |
| Unspecified | 2.1 Provide EMS<br>Incident Notification | EMS Incident Notifier             |       |
| Association | Public                                   | Public                            |       |
| Unspecified | EMS Incident Notifier                    | 2.2 Assess EMS<br>Incident Notice |       |

#### Healthcare Provider

*Type:* Actor

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Use Case Actors Keywords:

Detail: Created on 7/13/2009. Last modified on 7/19/2009. GUID: {A3D8F925-8466-461e-891A-E3A94600B066}

An organization or person who delivers proper health care in a systematic way professionally to any individual in need of health care services.

**Connections** 

| Connector                  | Source                      | Target                          | Notes |
|----------------------------|-----------------------------|---------------------------------|-------|
| Association<br>Unspecified | Public<br>4.0 EMS Patient   | Public<br>Healthcare Provider   |       |
|                            | Disposition                 |                                 |       |
| Association                | Public                      | Public                          |       |
| Unspecified                | Healthcare Provider         | 3.3 Provide Medical             |       |
|                            |                             | Oversight                       |       |
| <b>Generalization</b>      | Public                      | Public                          |       |
| Source -> Destination      | EMS Agency Response<br>Crew | Healthcare Provider             |       |
| Association                | Public                      | Public                          |       |
| Unspecified                | Healthcare Provider         | 4.2 Transfer Medical<br>Control |       |

# **Patient**

Type: <u>Actor</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Use Case Actors Keywords:

*Detail: Created on 7/13/2009. Last modified on 7/19/2009. GUID:* {CEF3DC6B-5FD7-4255-9AA5-95B0D15316FE}

A person who receives or is in need of medical attention, care, or treatment. The person is most often ill or injured and in need of treatment by a physician or other medical professional.

| Connector   | Source                | Target                      | Notes |
|-------------|-----------------------|-----------------------------|-------|
| Association | Public                | Public                      |       |
| Unspecified | Patient               | 4.0 EMS Patient Disposition |       |
| Association | Public                | Public                      |       |
| Unspecified | 3.1 Assess Patient    | Patient                     |       |
| Association | Public                | Public                      |       |
| Unspecified | Patient               | 3.2 Treat Patient           |       |
| Association | Public                | Public                      |       |
| Unspecified | 4.1 Transport Patient | Patient                     |       |
| Association | Public                | Public                      |       |
| Unspecified | Patient               | 3.0 EMS Patient             |       |
|             |                       | Encounter                   |       |

### **PatientEncounterBystander**

Type: Actor

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Use Case Actors Keywords:

*Detail: Created on 7/13/2009. Last modified on 7/19/2009. GUID:* {6AFE34FF-897C-40b7-8010-DB9036C34346}

Persons other than the patient that serve as a source or recipient of information provided to or from the EMS Agency Response Crew during a patient encounter.

#### **Connections**

| Connector                  | Source                                  | Target                                 | Notes |
|----------------------------|---|--|-------|
| Association                | Public                                  | Public                                 |       |
| Unspecified                | PatientEncounterBystan der              | 3.1 Assess Patient                     |       |
| Association<br>Unspecified | Public<br>PatientEncounterBystan<br>der | Public<br>3.0 EMS Patient<br>Encounter |       |

### **Public Safety Dispatcher**

Type: Actor

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Use Case Actors Keywords:

Detail: Created on 7/13/2009. Last modified on 7/28/2009. GUID: {44B4C739-AB1B-4ef8-8A87-33F0F34E7164}

Communications personnel responsible for receiving and transmitting pure and reliable messages, tracking vehicles and equipment, and recording other important information.

Public safety dispatchers (also known as emergency dispatchers or 9-1-1 dispatchers) receive calls from individuals who need assistance from Firefighters, Police Officers, and Emergency Medical Services.

Once information is obtained from the caller, these dispatchers activate the services necessary to respond to the nature of the call for help.

| Connector                  | Source                                | Target                                       | Notes |
|----------------------------|---------------------------------------|--|-------|
| Association<br>Unspecified | Public<br>Public Safety<br>Dispatcher | Public<br>2.0 EMS Response<br>Administration |       |
| Association<br>Unspecified | Public<br>Public Safety<br>Dispatcher | Public<br>2.3 Dispatch EMS<br>Personnel      |       |

| Connector                  | Source                                       | Target                                      | Notes |
|----------------------------|--|---|-------|
| Association<br>Unspecified | Public 2.1 Provide EMS Incident Notification | Public<br>Public Safety<br>Dispatcher       |       |
| Association<br>Unspecified | Public<br>Public Safety<br>Dispatcher        | Public<br>2.2 Assess EMS<br>Incident Notice |       |

## Regulator

Type: <u>Actor</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Use Case Actors Keywords:

*Detail: Created on 7/13/2009. Last modified on 7/19/2009. GUID:* {FD642693-DB38-40ac-8D35-769ED084651B}

A public authority or government agency responsible for exercising autonomous authority over emergency medical agency activities.

#### **Connections**

| Connector          | Source             | Target         | Notes |
|--------------------|--------------------|----------------|-------|
| <b>Association</b> | Public             | Public         |       |
| Unspecified        | 1.3 Monitor Agency | Regulator      |       |
|                    | Performance        |                |       |
|                    |                    |                |       |
| <b>Association</b> | Public             | Public         |       |
| Unspecified        | 1.2 Certify EMS    | Regulator      |       |
|                    | Agency             |                |       |
|                    |                    |                |       |
| <b>Association</b> | Public             | Public         |       |
| Unspecified        | Regulator          | 1.0 EMS Agency |       |
|                    |                    | Administration |       |
|                    |                    |                |       |

## **EMS DAM Interactions**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS DAM Behavioral Model

Detail: Created on 7/19/2009. Last modified on 7/19/2009 GUID: {4C16E89B-B49B-4889-825F-298040C5512F}

EMS DAM Interactions - (Sequence diagram)
Created By: AbdulMalik Shakir on 7/19/2009

*Last Modified:* 7/19/2009

Version: 1.0. Locked: False

GUID: {2873EC89-05E4-4a8d-8FC8-092D4F4FCFBC}

sd EMS DAM Interactions

Figure: 14

## **EMS DAM Static Information Model**

*Type:* Package

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS Domain Analysis Model

Detail: Created on 6/16/2009. Last modified on 7/15/2009
GUID: {52AFADBB-5A36-4339-ACE6-71B5D754C6B1}

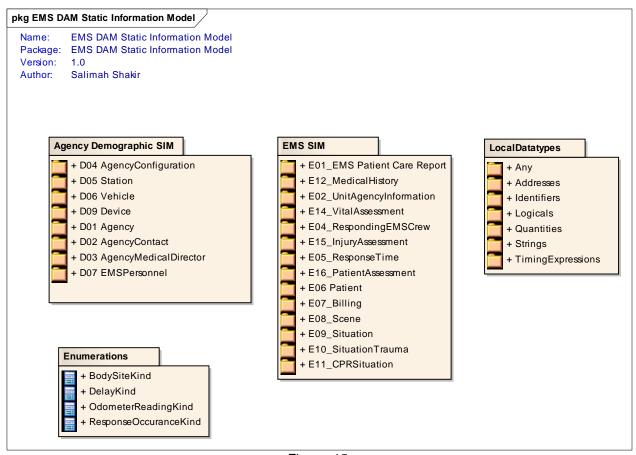
### **EMS DAM Static Information Model** - (Package diagram)

Created By: Salimah Shakir on 6/16/2009

*Last Modified:* 8/26/2009

Version: 1.0. Locked: False

GUID: {418FB983-231A-4ff0-959D-B863E04ACF9A}



#### Figure: 15

# **Agency Demographic SIM**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Static Information Model

Detail: Created on 7/1/2001. Last modified on 6/16/2009 GUID: {1119FB6F-B9F9-4bab-90E6-182B4E7D984D}

<u>Agency Demographic Package Diagram</u> - (Package diagram)

Created By: Salimah Shakir on 5/16/2009

*Last Modified:* 8/12/2009

Version: 1.0. Locked: False

*GUID*: {29F31041-4826-49d5-BDA7-9479D68A9FDB}

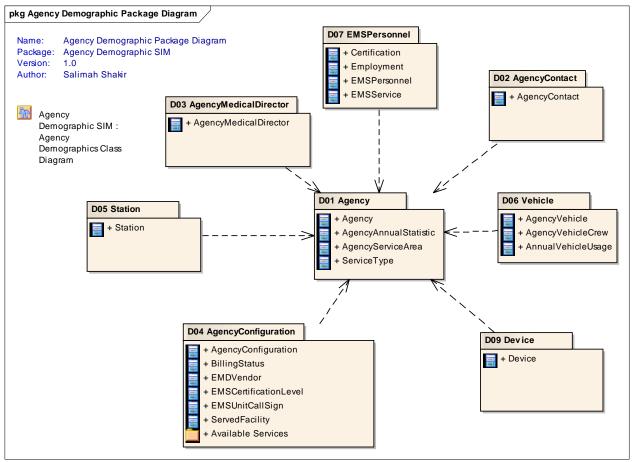


Figure: 16

### <u>Agency Demographics Class Diagram</u> - (Logical diagram)

Created By: Salimah Shakir on 6/16/2009

*Last Modified:* 6/18/2009

Version: 1.0. Locked: False

*GUID*: {602D06D5-F9DC-4f23-B292-326213B2F171}

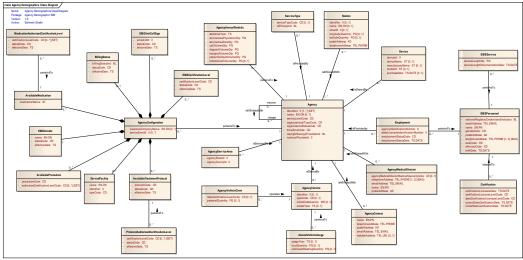


Figure: 17

## Agency Demographic SIM: Agency Demographics Class Diagram

Type: <u>Text</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Agency Demographic SIM Keywords:

Detail: Created on 6/16/2009. Last modified on 6/16/2009. GUID: {CF223B19-2DFC-4517-8413-46B7A2E3EB7A}

Agency Demographic SIM : Agency Demographics Class Diagram

# D01 Agency

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Agency Demographic SIM

*Detail:* Created on 5/16/2009. Last modified on 5/31/2009 GUID: {0E4872DA-ACC8-4048-96B2-7C4CC824D9AF}

**Agency** - (Logical diagram)

Created By: Salimah Shakir on 5/16/2009

*Last Modified:* 7/1/2009

Version: 1.0. Locked: False

*GUID*: {F9A86AAA-55BB-4f0d-936C-AA90C5FF36EF}

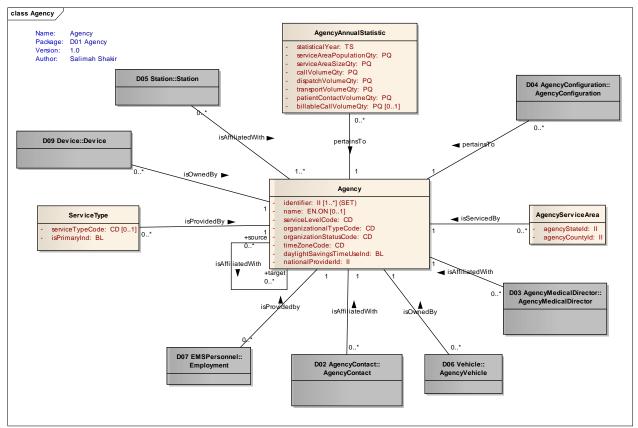


Figure: 18

### **Agency**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: D01 Agency Keywords:

Detail: Created on 5/12/2009. Last modified on 6/3/2009. GUID: {BB13FE96-5C79-4eeb-9F77-2D48E98A452E}

an administrative division (as of a government)

### **Custom Properties**

• isActive = False

#### **Connections**

| Connector        | Source                | Target | Notes                        |
|------------------|-----------------------|--------|------------------------------|
| Association      | Public                | Public | Each AgencyMedicalDirector   |
| isAffiliatedWith | AgencyMedicalDirector | Agency | always isAffiliatedWith one  |
| Unspecified      |                       |        | Agency.                      |
|                  |                       |        | Each Agency sometimes        |
|                  |                       |        | isAffiliatedWith one or more |
|                  |                       |        | AgencyMedicalDirector.       |

| Connector                                  | Source                          | Target                  | Notes  |
|--|---------------------------------|-------------------------|--|
| Association is Affiliated With Unspecified | Public<br>DispatchedUnit        | Public<br>Agency        | Each DispatchedUnit always isAffiliatedWith one Agency. Each Agency sometimes isAffiliatedWith one or more DispatchedUnit.       |
| Association pertains To Unspecified        | Public<br>AgencyAnnualStatistic | Public<br>Agency        | Each AgencyAnnualStatistic always pertainsTo one Agency. Each Agency sometimes isTheSubjectOf one or more AgencyAnnualStatistic. |
| Association<br>isProvidedBy<br>Unspecified | Public<br>ServiceType           | Public<br>Agency        | Each ServiceType always isProvidedBy one Agency. Each Agency sometimes provides one or more ServiceType.                         |
| Association<br>isProvidedby<br>Unspecified | Public<br>Employment            | Public<br>Agency        | Each Employment always isProvidedBy one Agency. Each Agency sometimes provides one or more Employment.                           |
| Association is Affiliated With Unspecified | Public<br>AgencyContact         | Public<br>Agency        | Each AgencyContact always isAffiliatedWith one Agency. Each Agency sometimes isAffiliatedWith one or more AgencyContact.         |
| Association is Affiliated With Unspecified | Public<br>Station               | Public<br>Agency        | Each Station always is Affiliated With one Agency. Each Agency sometimes is Affiliated With one or more Station.                 |
| Association isOwnedBy Unspecified          | Public<br>AgencyVehicle         | Public<br>Agency        | Each AgencyVehicle always isOwnedBy one Agency. Each Agency sometimes owns one or more AgencyVehicle.                            |
| Association pertainsTo Unspecified         | Public<br>AgencyConfiguration   | Public<br>Agency        | Each AgencyConfiguration always pertainsTo one Agency. Each Agency sometimes isTheSubjectOf one or more AgencyConfiguration.     |
| Association is Affiliated With Unspecified | Public source<br>Agency         | Public target<br>Agency | Each Agency sometimes is Affiliated With one or more Agency. Each Agency sometimes is Affilliated With one or more Agency.       |
| Association isOwnedBy Unspecified          | Public<br>Device                | Public<br>Agency        | Each Device always isOwnedBy one Agency.   |

| Connector                                       | Source                      | Target           | Notes  |
|---|-----------------------------|------------------|--|
|   |                             |                  | Each Agency sometimes owns one or more Device.   |
| Association<br>isServicedBy<br>Unspecified      | Public<br>AgencyServiceArea | Public<br>Agency | Each AgencyServiceArea always isServicedBy one Agency. Each Agency sometimes services one or more AgencyServiceArea.             |
| Association<br>isAffiliatedWith<br>Unspecified  | Public<br>PatientCareReport | Public<br>Agency | Each PatientCareReport always isAffiliatedWith one Agency. Each Agency sometimes isAffiliatedWith one or more PatientCareReport. |
| Association<br>isAffilialtedWith<br>Unspecified | Public<br>EMSSoftware       | Public<br>Agency |  |

| Attribute Attribute | Notes  | Constraints and tags                            |
|---------------------|--|---|
| identifier II       | The state-assigned provider number of the        | Default:  |
| Private             | responding agency.                               | NEMSIS Reference: { D01_01                      |
| Collection          |  | EMS Agency Number }                             |
| [1*]                |  |   |
| [1]                 |  |   |
|                     |  |   |
| name EN.ON          | A non unique textual identifier that constitutes | Default:  |
| Private             | the distinctive designation of an agency.        | NEMSIS Reference: { D01_11                      |
|                     |  | Other Agencies In Area }                        |
| [01]                |  | NEMSIS Reference: { D01_02<br>EMS Agency Name } |
| [01]                |  | EMS Agency Name }                               |
|                     |  |   |
|                     |  |   |
| serviceLevelCode CD | A coded value specifying the highest level of    | Default:  |
| Private             | service the agency is capable of sending to      | NEMSIS Reference: { D01_07                      |
|                     | perform any specific duty.                       | Level Of Service }                              |
|                     |  |   |
|                     |  |   |
|                     |  |   |
|                     |  |   |

| Attribute                                   | Notes  | Constraints and tags   |
|---|--|--|
| organizationalTypeCode<br>CD<br>Private     | A coded value specifying the specific organization type.   | Default: NEMSIS Reference: { D01_08 Organization Type }                    |
| organizationStatusCode<br>CD<br>Private     | A coded value specifying the primary organizational status of the agency.  | Default: NEMSIS Reference: { D01_09 Organization Status }                  |
| timeZoneCode CD<br>Private                  | A coded value specifying the time zone for the specific agency.  | Default: NEMSIS Reference: { D01_19 EMS Agency Time Zone }                 |
| daylightSavingsTimeUseI<br>nd BL<br>Private | Daylight Savings Time.   | Default: NEMSIS Reference: { D01_20 EMS Agency Daylight Savings Time Use } |
| <b>nationalProviderId</b> II<br>Private     | The National Provider Identifier associated with National Provider System (NPS) and used in all standard HIPAA transactions. | NEMSIS Reference: { D01_21 National Provider Identifier }                  |

## AgencyAnnualStatistic

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: D01 Agency Keywords:

 Detail:
 Created on 5/16/2009. Last modified on 7/1/2009.

 GUID:
 {0B081CB2-3D31-4bba-A843-09A3B96C898F}

the information stored for the organization yearly

## **Custom Properties**

• isActive = False

### **Connections**

| Connector                     | Source                | Target | Notes                         |
|-------------------------------|-----------------------|--------|-------------------------------|
| <b>Association</b> pertainsTo | Public                | Public | Each AgencyAnnualStatistic    |
| Unspecified                   | AgencyAnnualStatistic | Agency | always pertainsTo one Agency. |
|                               |                       |        | Each Agency sometimes         |
|                               |                       |        | isTheSubjectOf one or more    |
|                               |                       |        | AgencyAnnualStatistic.        |
|                               |                       |        |                               |

| Attributes Attribute                                     | Notes  | Constraints and tags  |
|--|--|---|
| statisticalYear TS Private  Collection                   | The data and information for the period of a year.   | Default: NEMSIS Reference: { D01_10 Statistical Year }              |
| serviceAreaPopulationQt<br>y PQ<br>Private<br>Collection | The total population in the agency's service area based on a particular year from the census data. | Default: NEMSIS Reference: { D01_13 Total Service Area Population } |
| serviceAreaSizeQty PQ Private Collection                 | The total square miles in the agency's service area.   | Default: NEMSIS Reference: { D01_12 Total Service Size Area }       |
| callVolumeQty PQ Private  Collection                     | The number of calls for a specific time period, such as a year.                                    | Default: NEMSIS Reference: { D01_14 911 Call Volume Per Year }      |

| Attribute   | Notes   | Constraints and tags  |
|---|---|---|
| Private  Collection  The number of dispatches for specific time period, such as a year.  The number of transports for specific time period, such as a year. |   | Default: NEMSIS Reference: { D01_15 EMS Dispatch Volume Per Year }        |
| transportVolumeQty PQ Private Collection  | The number of transports for specific time period, such as a year.                      | Default: NEMSIS Reference: { D01_16 EMS Transport Volume Per Year }       |
| patientContactVolumeQt<br>y PQ<br>Private<br>Collection   | The number of EMS patient contacts for a specific time period, such as a year.          | Default: NEMSIS Reference: { D01_17 EMS Patient Contact Volume Per Year } |
| billableCallVolumeQty PQ Private  Collection [01]   | The number of encounters which are billable for a specific time period, such as a year. | Default: NEMSIS Reference: { D01_18 EMS Billable Calls Per Year }         |

## AgencyServiceArea

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: D01 Agency Keywords:

Detail: Created on 5/16/2009. Last modified on 6/2/2009. GUID: {86983F86-8837-4fcc-83B0-2AF24637BE66}

The total square miles in the agency's service area

## **Custom Properties**

• isActive = False

**Connections** 

|--|

| Connector                   | Source            | Target | Notes  |
|-----------------------------|-------------------|--------|--|
| <b>Association</b>          | Public            | Public | Each AgencyServiceArea always  |
| isServicedBy<br>Unspecified | AgencyServiceArea | Agency | isServicedBy one Agency.<br>Each Agency sometimes services<br>one or more AgencyServiceArea. |

#### Attributes

| Attribute                    | Notes  | Constraints and tags  |
|------------------------------|--|---|
| agencyStateId II<br>Private  | The state in which the Agency provides services.     | Default: NEMSIS Reference: { D01_03 EMS Agency State }                          |
| agencyCountyId II<br>Private | The county(s) for which the agency provides service. | Default: NEMSIS Reference: { D01_04 EMS Agency County } Invariant: { State ID } |

## ServiceType

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: D01 Agency Keywords:

 Detail:
 Created on 5/16/2009. Last modified on 6/2/2009.

 GUID:
 {8CC552D4-574C-4d50-9FE1-90AA0B7ADBAD}

The type of service provided by an organization.

#### **Custom Properties**

• isActive = False

#### **Connections**

| Connector    | Source      | Target | Notes   |
|--------------|-------------|--------|---|
| Association  | Public      | Public | Each ServiceType always                                 |
| isProvidedBy | ServiceType | Agency | isProvidedBy one Agency.                                |
| Unspecified  |             |        | Each Agency sometimes provides one or more ServiceType. |
|              |             |        | one of more service type.                               |

#### **Attributes**

| Attribute                         | Notes   | Constraints and tags   |
|-----------------------------------|---|--|
| serviceTypeCode CD                | Acoded value specifying the type of service   | Default:   |
| Private                           | provided by an organization.  | NEMSIS Reference: { D01_06<br>Other Types Of Service }<br>NEMSIS Reference: { D01_05 |
| [01]                              |   | Primary Type Of Service }  |
| <b>isPrimaryInd</b> BL<br>Private | An indicator as to whether or not the identified service type is the primary service type of the associated agency. | Default:   |

# **D02 AgencyContact**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Agency Demographic SIM

Detail: Created on 5/17/2009. Last modified on 5/31/2009 GUID: {9186FFB6-0C83-40c5-A020-84ED3822B31B}

 $\underline{AgencyContact} \text{ - } (Logical \ diagram)$ 

Created By: Salimah Shakir on 5/17/2009

*Last Modified:* 7/14/2009

Version: 1.0. Locked: False

GUID: {13A22F24-CE89-43cf-94C5-A9413316F254}

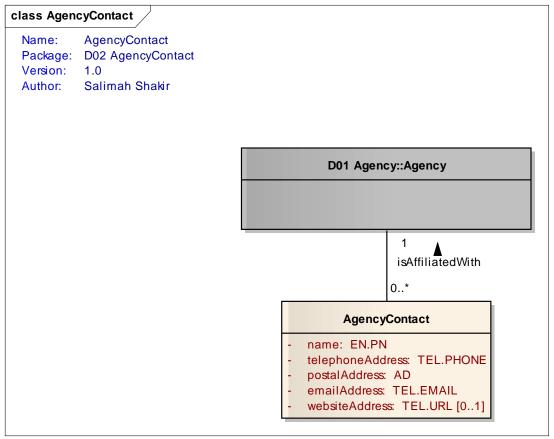


Figure: 19

### **AgencyContact**

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0. Package: D02 AgencyContact Keywords:

Detail: Created on 5/17/2009. Last modified on 6/2/2009. GUID: {517A46DF-29D6-49b0-B084-084A0BFCC752}

The contact information for a particular organization

#### **Custom Properties**

• isActive = False

## **Connections**

| Connector        | Source        | Target | Notes                        |
|------------------|---------------|--------|------------------------------|
| Association      | Public        | Public | Each AgencyContact always    |
| isAffiliatedWith | AgencyContact | Agency | isAffiliatedWith one Agency. |
| Unspecified      |               |        | Each Agency sometimes        |
|                  |               |        | isAffiliatedWith one or more |
|                  |               |        | AgencyContact.               |

| Connector | Source | Target | Notes |
|-----------|--------|--------|-------|
|           |        |        |       |

| Attributes Control of the Control of |  |   |  |  |
|--|--|---|--|--|
| Attribute  | Notes  | Constraints and tags  |  |  |
| name EN.PN<br>Private  | A non-unique textual identifier that constitutes the distinctive designation of an agency. | Default: NEMSIS Reference: { D02_03 Agency Contact First Name } NEMSIS Reference: { D02_02 Agency Contact Middle Name/ Initial } NEMSIS Reference: { D02_01 Agency Contact Last Name }                                      |  |  |
| telephoneAddress   | A number assigned to a telephone line for a  | Default:  |  |  |
| TEL.PHONE<br>Private   | specific location that is used to call that agency.  | NEMSIS Reference: { D02_08<br>Agency Contact Telephone Number<br>}<br>NEMSIS Reference: { D02_09<br>Agency Contact Fax Number }   |  |  |
| postalAddress AD   | The identifieg mailing location for an agency.   | Default:  |  |  |
| Private  | This Includes street, city, state, and postal code.  | NEMSIS Reference: { D02_06<br>Agency Contact State }<br>NEMSIS Reference: { D02_07<br>Agency Contact Zip }<br>NEMSIS Reference: { D02_04<br>Agency Contact Address }<br>NEMSIS Reference: { D02_05<br>Agency Contact City } |  |  |
| emailAddress   | Identifies a location to which e-mail messages   | Default:  |  |  |
| TEL.EMAIL Private  | can be recieved and/ or delivered for an agency.   | NEMSIS Reference: { D02_10<br>Agency Contact Email Address }  |  |  |
| websiteAddress TEL.URL   | World Wide Web page usually containing   | Default:  |  |  |
| Private  | hyperlinks to each other and made available online by an agency.                           | NEMSIS Reference: { D02_11<br>Agency Contact Web Address }  |  |  |
| [01]   |  |   |  |  |
|  |  |   |  |  |

## D03 AgencyMedicalDirector

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Agency Demographic SIM

Detail: Created on 5/17/2009. Last modified on 5/31/2009 GUID: {8C96BBDD-344C-4b34-9F7B-90E26FEF14D8}

<u>AgencyMedicalDirector</u> - (Logical diagram)

Created By: Salimah Shakir on 5/17/2009

*Last Modified:* 7/14/2009

Version: 1.0. Locked: False

GUID: {ABA5F566-1C47-4be3-A566-FC45518687BB}

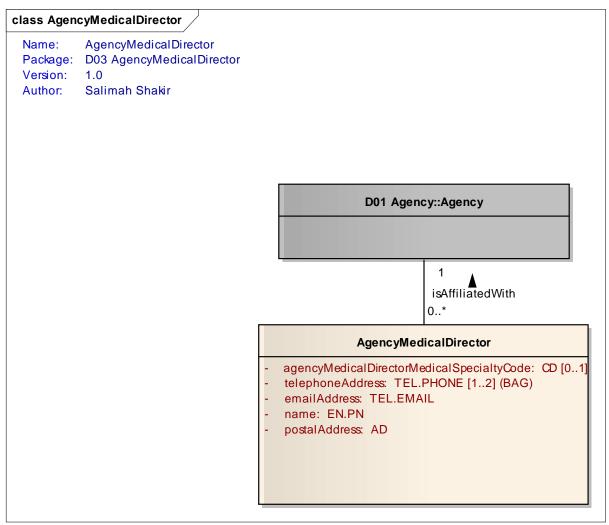


Figure: 20

### AgencyMedicalDirector

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: D03 AgencyMedicalDirector Keywords:

Detail: Created on 5/17/2009. Last modified on 6/3/2009. GUID: {EFA6AA77-AFE4-4082-9AFD-DB0A03F58C46}

a person with a directing position within the organization.

### **Custom Properties**

• isActive = False

**Connections** 

| Connector        | Source                | Target | Notes                        |
|------------------|-----------------------|--------|------------------------------|
| Association      | Public                | Public | Each AgencyMedicalDirector   |
| isAffiliatedWith | AgencyMedicalDirector | Agency | always isAffiliatedWith one  |
| Unspecified      |                       |        | Agency.                      |
|                  |                       |        | Each Agency sometimes        |
|                  |                       |        | isAffiliatedWith one or more |
|                  |                       |        | AgencyMedicalDirector.       |
|                  |                       |        |                              |

| Attribute   | Notes   | Constraints and tags   |
|---|---|--|
| agencyMedicalDirectorM<br>edicalSpecialtyCode CD<br>Private | The primary medical specialty of the Agency Medical Director.   | Default: NEMSIS Reference: { D03_10 Agency Medical Director's Medical Specialty }  |
| telephoneAddress TEL.PHONE Private  Collection [12]         | A number assigned to a telephone line for a the Agency Medical Director.  | Default: NEMSIS Reference: { D03_08 Agency Medical Director Telephone Number } NEMSIS Reference: { D03_09 Agency Medical Director Fax Number } |
| emailAddress<br>TEL.EMAIL<br>Private                        | Identifies a location to which e-mail messages can be recieved and/ or delivered for the Agency Medical Director. | Default: NEMSIS Reference: { D03_11 Agency Medical Director Email Address }  |

| Attribute                   | Notes  | Constraints and tags   |
|-----------------------------|--|--|
| name EN.PN<br>Private       | The name of the Agency Medical Director. Can consist of First, Middle, and Last parts of the name.                   | Default: NEMSIS Reference: { D03_01 Agency Medical Director Last Name } NEMSIS Reference: { D03_03 Agency Medical Director First Name } NEMSIS Reference: { D03_02 Agency Medical Director Middle Name/ Initial }  |
| postalAddress AD<br>Private | The identifieg mailing location for the Agency Medical Director. This Includes street, city, state, and postal code. | Default: NEMSIS Reference: { D03_04 Agency Medical Director Address } NEMSIS Reference: { D03_05 Agency Medical Director City } NEMSIS Reference: { D03_06 Agency Medical Director State } NEMSIS Reference: { D03_07 Agency Medical Director Zip Code } |

## **D04 AgencyConfiguration**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Agency Demographic SIM

Detail: Created on 5/30/2009. Last modified on 5/31/2009 GUID: {FC635EF6-6EE8-4387-9F83-610D8DBA6739}

<u>AgencyConfiguration</u> - (Logical diagram) <u>Created By:</u> Salimah Shakir on 5/30/2009

*Last Modified:* 7/14/2009

Version: 1.0. Locked: False

GUID: {A57C4738-0DC0-4a89-AB19-FDD31F31BEE3}

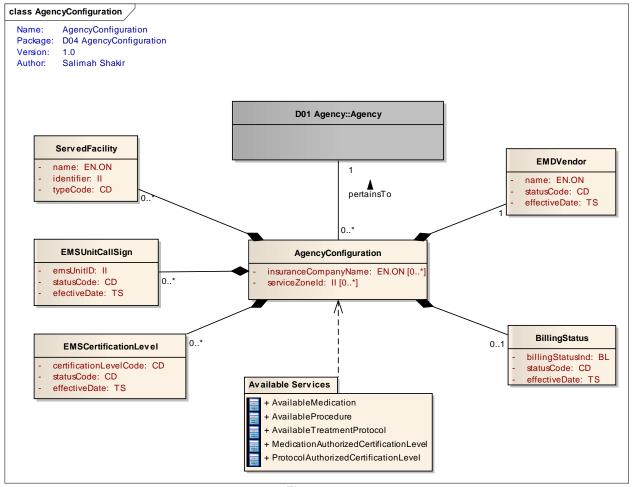


Figure: 21

### **AgencyConfiguration**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0. Package: D04 AgencyConfiguration Keywords:

Detail: Created on 5/30/2009. Last modified on 6/16/2009. GUID: {B7370CEB-507F-4faf-B0E5-0AFBBFE113CA}

information pertaining to insurance companies which are prevalent in the Agencies service area

### **Custom Properties**

• isActive = False

#### **Connections**

| Connector             | Source                | Target              | Notes |
|-----------------------|-----------------------|---------------------|-------|
| <b>Aggregation</b>    | Public                | Public              |       |
| Source -> Destination | EMSCertificationLevel | AgencyConfiguration |       |

| Association<br>Unspecified       Public<br>AgencyConfiguration       Public<br>Agency       Each AgencyConfiguration alw<br>pertainsTo one Agency.<br>Each Agency sometimes<br>is TheSubjectOf one or more<br>AgencyConfiguration         Dependency<br>Source -> Destination       Public<br>Available Services       Public<br>AgencyConfiguration         Aggregation<br>Source -> Destination       Public<br>Available TreatmentProtocol       Public<br>AgencyConfiguration         Aggregation<br>Source -> Destination       Public<br>Billing Status       Public<br>AgencyConfiguration         Aggregation<br>Source -> Destination       Public<br>Served Facility       Public<br>AgencyConfiguration         Aggregation<br>Source -> Destination       Public<br>Available Procedure       Public<br>AgencyConfiguration         Aggregation<br>Source -> Destination       Public<br>Available Medication       Public<br>AgencyConfiguration         Aggregation<br>Source -> Destination       Public<br>Available Medication       Public<br>AgencyConfiguration | Connector             | Source              | Target              | Notes   |
|---|-----------------------|---------------------|---------------------|---|
| AgencyConfiguration   |                       |                     |                     |   |
| Source -> Destination   Available Services   AgencyConfiguration  |                       |                     |                     | pertainsTo one Agency. Each Agency sometimes isTheSubjectOf one or more |
| Source -> Destination   Available Services   AgencyConfiguration  | Dependency            | Public              | Public              |   |
| Source -> Destination  AvailableTreatmentProt ocol  Aggregation Source -> Destination  Public BillingStatus  Public AgencyConfiguration  Aggregation Source -> Destination  Public ServedFacility  AgencyConfiguration  Public AgencyConfiguration  Public AgencyConfiguration  Aggregation Source -> Destination  Public EMDVendor  AgencyConfiguration  Public AgencyConfiguration  Aggregation Source -> Destination  Public AvailableProcedure  AgencyConfiguration  Public AgencyConfiguration  Aggregation Source -> Destination  Public AvailableProcedure  AgencyConfiguration  Aggregation Source -> Destination  Public AgencyConfiguration  Aggregation Source -> Destination  Aggregation Source -> Destination  AvailableMedication  AgencyConfiguration   |                       |                     |                     |   |
| Aggregation   Public   Public   AgencyConfiguration   |                       | Public              |                     |   |
| Source -> Destination  BillingStatus  AgencyConfiguration  Public Source -> Destination  Public Source -> Destination  Public Public Public AgencyConfiguration  Public AgencyConfiguration  Public AgencyConfiguration  Public AgencyConfiguration  Public AgencyConfiguration  AgencyConfiguration  Public AgencyConfiguration  Public AgencyConfiguration  Public AgencyConfiguration  Public AgencyConfiguration  AgencyConfiguration  AgencyConfiguration  AgencyConfiguration  AgencyConfiguration  AgencyConfiguration   | Source -> Destination |                     | AgencyConfiguration |   |
| Aggregation       Public       Public         Source -> Destination       Public       AgencyConfiguration   | Aggregation           | Public              | Public              |   |
| Source -> Destination       ServedFacility       AgencyConfiguration         Aggregation Source -> Destination       Public EMDVendor       Public AgencyConfiguration         Aggregation Source -> Destination       Public AvailableProcedure       Public AgencyConfiguration         Aggregation Source -> Destination       Public AvailableMedication       Public AgencyConfiguration         Aggregation Source -> Destination       Public AvailableMedication       AgencyConfiguration  | Source -> Destination | BillingStatus       | AgencyConfiguration |   |
| Aggregation       Public       Public         Source -> Destination       EMDVendor       AgencyConfiguration         Aggregation       Public       Public         Source -> Destination       AvailableProcedure       AgencyConfiguration         Aggregation       Public       Public         Source -> Destination       AvailableMedication       AgencyConfiguration  | Aggregation           | Public              | Public              |   |
| Source -> Destination  EMDVendor  AgencyConfiguration  AgencyConfiguration  Public AvailableProcedure  AgencyConfiguration  AgencyConfiguration  Public AgencyConfiguration  Public AgencyConfiguration  AgencyConfiguration  AgencyConfiguration  AgencyConfiguration  | Source -> Destination | ServedFacility      | AgencyConfiguration |   |
| Aggregation       Public       Public         Source -> Destination       AvailableProcedure       AgencyConfiguration         Aggregation       Public       Public         Source -> Destination       AvailableMedication       AgencyConfiguration  | Aggregation           | Public              | Public              |   |
| Source -> Destination AvailableProcedure AgencyConfiguration  Aggregation Public Public AvailableMedication AgencyConfiguration   | Source -> Destination | EMDVendor           | AgencyConfiguration |   |
| Aggregation Source -> Destination Public AvailableMedication Public AgencyConfiguration   | Aggregation           | Public              | Public              |   |
| Source -> Destination AvailableMedication AgencyConfiguration   | Source -> Destination | AvailableProcedure  | AgencyConfiguration |   |
|   | Aggregation           | Public              | Public              |   |
|   | Source -> Destination | AvailableMedication | AgencyConfiguration |   |
|   | Aggregation           | Public              | Public              |   |
| Source -> Destination EMSUnitCallSign AgencyConfiguration   | Source -> Destination | EMSUnitCallSign     | AgencyConfiguration |   |

| Attribute            | Notes   | Constraints and tags       |
|----------------------|---|----------------------------|
| insuranceCompanyName | A list of insurance companies which are         | Default:                   |
| EN.ON                | prevalent in the Agencies service area.         | NEMSIS Reference: { D04_16 |
| Private              |   | Insurance Companies Used } |
| Collection [0*]      |   |                            |
| serviceZoneId II     | The geographic zones used by an agency to       | Default:                   |
| Private              | divide the service area into smaller geographic | NEMSIS Reference: { D04_03 |
|                      | components. These zones can be defined          | Zones }                    |
| Collection           | locally using any method which will allow easy  |                            |
| [0*]                 | assignment of locations to their respective     |                            |
|                      | zone.   |                            |
|                      |   |                            |
|                      |   |                            |

## **BillingStatus**

Type: <u>Class</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: D04 AgencyConfiguration Keywords:

Detail: Created on 5/30/2009. Last modified on 6/3/2009. GUID: {79343CAB-A4F0-4385-AE0F-56DADB185B76}

information pertaining to the bills for any segment of the patient population for a particular organization

#### **Custom Properties**

• isActive = False

#### **Connections**

| Connector             | Source        | Target              | Notes |
|-----------------------|---------------|---------------------|-------|
| Aggregation           | Public        | Public              |       |
| Source -> Destination | BillingStatus | AgencyConfiguration |       |
|                       |               |                     |       |

**Attributes** 

| Attribute                      | Notes   | Constraints and tags                                 |
|--------------------------------|---|--|
| billingStatusInd BL<br>Private | Indication of whether the organization routinely bills for any segment of the patient population. | Default: NEMSIS Reference: { D04_10 Billing Status } |
| statusCode CD<br>Private       | A coded value specifying the state or condition with respect to circumstances.                    | Default: NEMSIS Reference: { D04_10 Billing Status } |
| effectiveDate TS<br>Private    | The date on which the corresponding class subject has taken place.                                | Default: NEMSIS Reference: { D04_10 Billing Status } |

#### **EMDVendor**

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0. Package: D04 AgencyConfiguration Keywords:

Detail: Created on 5/30/2009. Last modified on 6/3/2009. GUID: {9DF32C64-FFB7-483a-A83E-C8974FEA80FE}

The Vendor or Company associated with the EMD Card set and algorithms

#### **Custom Properties**

• isActive = False

#### **Connections**

| Connector             | Source    | Target              | Notes |
|-----------------------|-----------|---------------------|-------|
| Aggregation           | Public    | Public              |       |
| Source -> Destination | EMDVendor | AgencyConfiguration |       |

#### **Attributes**

| Attribute                   | Notes   | Constraints and tags                             |
|-----------------------------|---|--|
| name EN.ON<br>Private       | A non-unique textual identifier that constitutes the distinctive designation of a vendor. | Default: NEMSIS Reference: { D04_17 EMD Vendor } |
| statusCode CD<br>Private    | A coded value specifying the state or condition with respect to the vendor.               | Default: NEMSIS Reference: { D04_17 EMD Vendor } |
| effectiveDate TS<br>Private | The date oin which the vendor is effective.   | Default: NEMSIS Reference: { D04_17 EMD Vendor } |

#### **EMSCertificationLevel**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.
Package: D04 AgencyConfiguration Keywords:

Detail: Created on 5/30/2009. Last modified on 6/3/2009. GUID: {91E79983-470A-457a-A9DA-EFC1E2974060}

All of the potential levels of certification/licensure for personnel recognized by the state

#### **Custom Properties**

• isActive = False

#### **Connections**

| Connector             | Source                | Target              | Notes |
|-----------------------|-----------------------|---------------------|-------|
| <b>Aggregation</b>    | Public                | Public              |       |
| Source -> Destination | EMSCertificationLevel | AgencyConfiguration |       |
|                       |                       |                     |       |

### **Attributes**

| Attribute                               | Notes   | Constraints and tags   |
|---|---|--|
| certificationLevelCode<br>CD<br>Private | A coded value specifying the potential levels of certification/licensure for personnel recognized by the state. | Default: NEMSIS Reference: { D04_01 State Certification Licensure Levels } |
| statusCode CD<br>Private                | A coded value specifying the state or condition with respect to circumstances.                                  | Default: NEMSIS Reference: { D04_01 State Certification Licensure Levels } |
| effectiveDate TS Private                | The date on which the corresponding class subject has taken place.  | Default: NEMSIS Reference: { D04_01 State Certification Licensure Levels } |

### **EMSUnitCallSign**

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: D04 AgencyConfiguration Keywords:

 Detail:
 Created on 5/30/2009. Last modified on 7/13/2009.

 GUID:
 {DC214DFE-825D-4080-A824-FAC493A9FF58}

The EMS unit number used to dispatch and communicate with the unit. This may be the same as the EMS Unit/Vehicle Number in many agencies.

#### **Custom Properties**

• isActive = False

#### **Connections**

| Connector                                      | Source                    | Target                        | Notes  |
|--|---------------------------|-------------------------------|--|
| Association<br>isAffiliatedWith<br>Unspecified | Public<br>DispatchedUnit  | Public<br>EMSUnitCallSign     | Each DispatchedUnit always isAffiliatedWith one EMSUnitCallSign. Each EMSUnitCallSign sometimes isAffiliatedWith one or more DispatchedUnit. |
| Aggregation Source -> Destination              | Public<br>EMSUnitCallSign | Public<br>AgencyConfiguration |  |

#### **Attributes**

| Attribute                  | Notes   | Constraints and tags                                     |
|----------------------------|---|--|
| emsUnitID II<br>Private    | The EMS unit number used to dispatch and communicate with the unit. This may be the same as the EMS Unit/Vehicle Number in many agencies. | Default: NEMSIS Reference: { D04_02 EMS Unit Call Sign } |
| statusCode CD<br>Private   | A coded value specifying the state or condition with respect to circumstances.  | Default: NEMSIS Reference: { D04_02 EMS Unit Call Sign } |
| efectiveDate TS<br>Private | The date on which the corresponding class subject has taken place.  | Default: NEMSIS Reference: { D04_02 EMS Unit Call Sign } |

## ServedFacility

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: D04 AgencyConfiguration Keywords:

Detail: Created on 5/30/2009. Last modified on 6/3/2009. GUID: {A1047F1D-5BC9-4249-8CAE-CC714F23DD39}

A list of all the hospitals the agency transports to or from

### **Custom Properties**

• isActive = False

#### **Connections**

| Connector             | Source         | Target              | Notes |
|-----------------------|----------------|---------------------|-------|
| Aggregation           | Public         | Public              |       |
| Source -> Destination | ServedFacility | AgencyConfiguration |       |
|                       |                |                     |       |

<u>Attributes</u>

| Attribute                | Notes  | Constraints and tags  |
|--------------------------|--|---|
| name EN.ON<br>Private    | A non-unique textual identifier that lists all the hospitals the agency transports to or from. | Default: NEMSIS Reference: { D04_13 Other Destinations } NEMSIS Reference: { D04_11 Hospitals Served }                  |
| identifier II<br>Private | The state assigned licensure number (code) for each Hospital (or other) Served (D04_11).       | Default: NEMSIS Reference: { D04_14 Destination Facility Number } NEMSIS Reference: { D04_12 Hospital Facility Number } |
| typeCode CD<br>Private   | A coded value specifying the kind of service provided by the facility.                         | Default: NEMSIS Reference: { D04_15 Destination Type }  |

### **Available Services**

*Type:* Package

Status: Proposed. Version 1.0. Phase 1.0. Package: D04 AgencyConfiguration

Detail: Created on 6/1/2009. Last modified on 6/1/2009 GUID: {989ED709-FA9E-47a0-958F-4F19F5D5EA68}

<u>Available Services</u> - (Logical diagram)

<u>Created By:</u> Salimah Shakir on 6/1/2009

*Last Modified:* 6/30/2009

Version: 1.0. Locked: False

*GUID:* {43EFAAD3-8DEF-478e-B94E-52E63700EB3A}

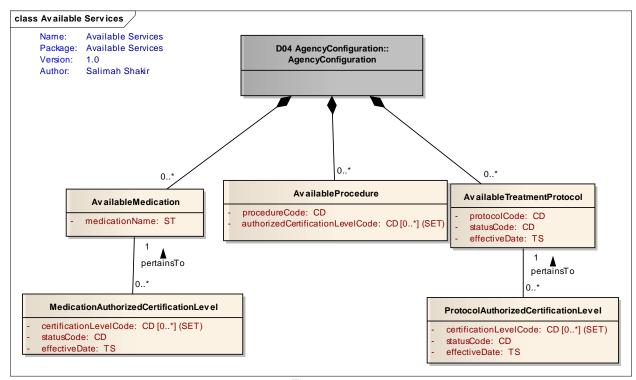


Figure: 22

#### AvailableMedication

Type: Class

Status: Proposed. Version 1.0. Phase 1.0. Package: Available Services Keywords:

 Detail:
 Created on 5/30/2009. Last modified on 6/3/2009.

 GUID:
 {07301234-E2B7-4a46-9A4E-381F4200FCFB}

A list of all medications the agency has implemented and available for use

#### **Custom Properties**

• isActive = False

#### **Connections**

| Connector                         | Source                                  | Target                        | Notes |
|-----------------------------------|---|-------------------------------|-------|
| <b>Association</b> pertainsTo     | Public                                  | Public                        |       |
| Unspecified                       | MedicationAuthorizedC ertificationLevel | AvailableMedication           |       |
| Aggregation Source -> Destination | Public<br>AvailableMedication           | Public<br>AgencyConfiguration |       |

<u>Attributes</u>

| Attribute         | Notes                                    | Constraints and tags       |
|-------------------|--|----------------------------|
| medicationName ST | A list of all medications the agency has | Default:                   |
| Private           | implemented and available for use.       | NEMSIS Reference: { D04_06 |
|                   |  | Medications Given }        |
| Collection        |  |                            |
|                   |  |                            |
|                   |  |                            |
|                   |  |                            |
|                   |  |                            |

## AvailableProcedure

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0. Package: Available Services Keywords:

Detail: Created on 5/30/2009. Last modified on 6/3/2009. GUID: {90A7A5CB-8F2D-4181-B1A3-EFA0CC945215}

A list of all procedures that the agency has implemented and available for use.

#### **Custom Properties**

• isActive = False

#### **Connections**

| Connector             | Source             | Target              | Notes |
|-----------------------|--------------------|---------------------|-------|
| Aggregation           | Public             | Public              |       |
| Source -> Destination | AvailableProcedure | AgencyConfiguration |       |
|                       |                    |                     |       |

| Attribute | Notes | Constraints and tags |  |
|-----------|-------|----------------------|--|

| Attribute  | Notes  | Constraints and tags  |
|--|--|---|
| procedureCode CD<br>Private  | A coded value specifying the list of all procedures that the agency has implemented and available for use. | Default: NEMSIS Reference: { D04_04 Procedures }                            |
| authorizedCertificationL<br>evelCode CD<br>Private<br>Collection<br>[0*] | A coded value specifying the personnel levels which are permitted to use the associated procedure.         | NEMSIS Reference: { D04_05 Personnel Level Permitted To Use The Procedure } |

#### AvailableTreatmentProtocol

Type: <u>Class</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: Available Services Keywords:

*Detail:* Created on 5/30/2009. Last modified on 6/3/2009. GUID: {119A20EC-CDB9-49f2-A513-2D4975400209}

A list of all of the medical treatment protocols that the agency has in place and available for use.

#### **Custom Properties**

• isActive = False

**Connections** 

| Connector                     | Source                 | Target                 | Notes |
|-------------------------------|------------------------|------------------------|-------|
| <b>Association</b> pertainsTo | Public                 | Public                 |       |
| Unspecified                   | ProtocolAuthorizedCert | AvailableTreatmentProt |       |
|                               | ificationLevel         | ocol                   |       |
|                               |                        |                        |       |
| Aggregation                   | Public                 | Public                 |       |
| Source -> Destination         | AvailableTreatmentProt | AgencyConfiguration    |       |
|                               | ocol                   |                        |       |
|                               |                        |                        |       |

| Attribute | Notes | Constraints and tags |
|-----------|-------|----------------------|
|           |       |                      |

| Attribute                   | Notes   | Constraints and tags                           |
|-----------------------------|---|--|
| protocolCode CD<br>Private  | A coded value specifying the list of all of the medical treatment protocols that the agency has in place and available for use. | Default: NEMSIS Reference: { D04_08 Protocol } |
| Collection                  |   |  |
| statusCode CD<br>Private    | A coded value specifying the state or condition with respect to the circumstances.  | Default: NEMSIS Reference: { D04_08 Protocol } |
| effectiveDate TS<br>Private | the date in which the corresponding class subject has taken place   | Default: NEMSIS Reference: { D04_08 Protocol } |

## Medication Authorized Certification Level

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0. Package: Available Services Keywords:

 Detail:
 Created on 5/30/2009. Last modified on 6/3/2009.

 GUID:
 {C745CCF1-2FF8-4854-A0F6-00AB7ADE2C08}

All personnel levels which are permitted to use the associated medication

#### **Custom Properties**

• isActive = False

### **Connections**

| Connector                     | Source                                  | Target              | Notes |
|-------------------------------|---|---------------------|-------|
| <b>Association</b> pertainsTo | Public                                  | Public              |       |
| Unspecified                   | MedicationAuthorizedC ertificationLevel | AvailableMedication |       |
|                               |   |                     |       |

| Attribute Notes | Constraints and tags |
|-----------------|----------------------|
|-----------------|----------------------|

| Attribute  | Notes   | Constraints and tags  |
|--|---|---|
| certificationLevelCode CD Private  Collection [0*] | A coded value specifying the personnel levels which are permitted to use the associated medication. | Default: NEMSIS Reference: { D04_07 Personnel Level Permitted To Use The Medication } |
| statusCode CD<br>Private                           | A coded value specifying the state or condition with respect to circumstances.                      | Default: NEMSIS Reference: { D04_07 Personnel Level Permitted To Use The Medication } |
| effectiveDate TS<br>Private                        | The date on which the corresponding class subject has taken place.                                  | Default: NEMSIS Reference: { D04_07 Personnel Level Permitted To Use The Medication } |

### ProtocolAuthorizedCertificationLevel

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0. Package: Available Services Keywords:

*Detail: Created on 5/30/2009. Last modified on 6/3/2009. GUID:* {7DEB5295-8833-4f55-ABFF-F7FF193BFB5B}

All personnel levels which are permitted to use the associated Protocol

#### **Custom Properties**

• isActive = False

### **Connections**

| Connector                     | Source                 | Target                 | Notes |
|-------------------------------|------------------------|------------------------|-------|
| <b>Association</b> pertainsTo | Public                 | Public                 |       |
| Unspecified                   | ProtocolAuthorizedCert | AvailableTreatmentProt |       |
|                               | ificationLevel         | ocol                   |       |
|                               |                        |                        |       |

| Attribute Notes | Constraints and tags |
|-----------------|----------------------|
|-----------------|----------------------|

| Attribute  | Notes   | Constraints and tags   |
|--|---|--|
| certificationLevelCode CD Private  Collection [0*] | A coded value specifying the personnel levels which are permitted to use the associated protocol. | Default: NEMSIS Reference: { D04_09 Personnel Level Permitted To Use Thes Protocol } |
| statusCode CD<br>Private                           | A coded value specifying the state or condition with respect to circumstances.                    | Default: NEMSIS Reference: { D04_05 Personnel Level Permitted To Use The Procedure } |
| effectiveDate TS<br>Private                        | The date on which the protocol certification was authorized.                                      | Default: NEMSIS Reference: { D04_05 Personnel Level Permitted To Use The Procedure } |

## **D05 Station**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Agency Demographic SIM

 Detail:
 Created on 5/27/2009. Last modified on 5/31/2009

 GUID:
 {B2F99C53-4FDC-459a-8A96-2DBB11CAB35E}

<u>Station</u> - (Logical diagram)

Created By: Salimah Shakir on 5/27/2009

*Last Modified:* 6/1/2009

Version: 1.0. Locked: False

GUID: {A461165E-2587-463d-8BC8-55323663F549}

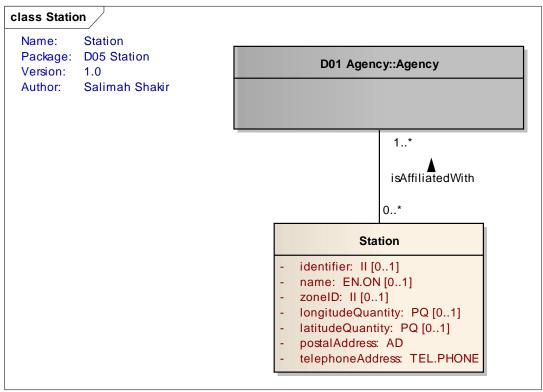


Figure: 23

#### **Station**

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: D05 Station Keywords:

*Detail: Created on 5/27/2009. Last modified on 6/30/2009. GUID:* {E9BE373B-E1E0-4693-BA74-3FD504F160FB}

a place established to provide a public service: as a (1): fire station (2): police station

## **Custom Properties**

• isActive = False

#### **Connections**

| Connections      |                |         |                               |
|------------------|----------------|---------|-------------------------------|
| Connector        | Source         | Target  | Notes                         |
| Association      | Public         | Public  | Each Station always           |
| isAffiliatedWith | Station        | Agency  | isAffiliatedWith one Agency.  |
| Unspecified      |                |         | Each Agency sometimes         |
|                  |                |         | isAffiliatedWith one or more  |
|                  |                |         | Station.                      |
|                  |                |         |                               |
| Association      | Public         | Public  | Each DispatchedUnit always    |
| isAffiliatedWith | DispatchedUnit | Station | isAffiliatedWith one Station. |

| Connector   | Source | Target | Notes  |
|-------------|--------|--------|--|
| Unspecified |        |        | Each Station sometimes is Affiliated With one or more Dispatched Unit. |

| Attribute Attribute               | Notes  | Constraints and tags                                 |
|-----------------------------------|--|--|
| identifier II Private  [01]       | The state-assigned provider number of the responding station.  | Default: NEMSIS Reference: { D05_02 Station Number } |
| name EN.ON<br>Private             | A non unique textual identifier that constitutes the distinctive designation of a station.   | Default: NEMSIS Reference: { D05_1 Station Name }    |
| zoneID II Private  [01]           | A coded value specifying the time zone for the specific station.   | Default: NEMSIS Reference: { D05_03 Station Zone }   |
| longitudeQuantity PQ Private [01] | The arc or portion of the earth's equator intersected between the meridian of a given place and the prime meridian and expressed either in degrees or in time. | Default: NEMSIS Reference: { D05_04 Station GPS }    |
| latitudeQuantity PQ Private  [01] | Angular distance north or south from the earth's equator measured through 90 degrees.  | Default: NEMSIS Reference: { D05_04 Station GPS }    |

| Attribute                                | Notes  | Constraints and tags  |
|--|--|---|
| postalAddress AD<br>Private              | The identifieg mailing location for a station. This Includes street, city, state, and postal code. | Default: NEMSIS Reference: { D05_05 Station Address } NEMSIS Reference: { D05_06 Station City } NEMSIS Reference: { D05_07 Station State } NEMSIS Reference: { D05_08 Station Zip } |
| telephoneAddress<br>TEL.PHONE<br>Private | A number assigned to a telephone line for a specific location that is used to call that station.   | Default: NEMSIS Reference: { D03_08 Agency Medical Director Telephone Number } NEMSIS Reference: { D03_09 Agency Medical Director Fax Number }                                      |

## **D06 Vehicle**

Type: **Package** 

Status: Proposed. Version 1.0. Phase 1.0. Package: Agency Demographic SIM

Detail: Created on 5/30/2009. Last modified on 5/31/2009 GUID: {AA8276AD-6D12-457a-A4DD-A2DD5A594002}

<u>Vehicle</u> - (Logical diagram) Created By: Salimah Sh Salimah Shakir on 5/30/2009

Last Modified: 5/30/2009

Version: 1.0. *Locked:* False

GUID: {D70BCBB1-FF47-4b02-8C3A-EAC90CFC46E7}

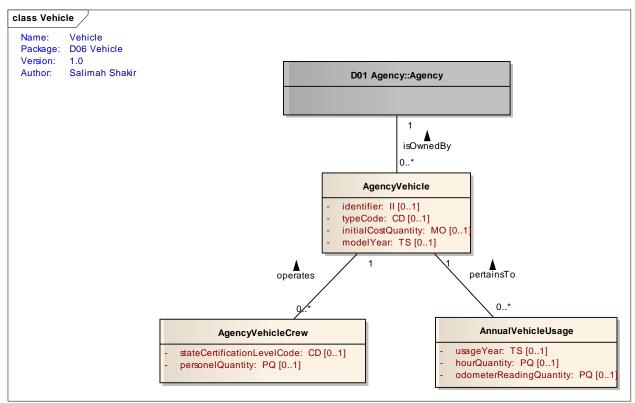


Figure: 24

## **AgencyVehicle**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: D06 Vehicle Keywords:

Detail: Created on 5/30/2009. Last modified on 6/29/2009. GUID: {A16B6F9E-4236-46e5-A14A-133139C21463}

a means of carrying or transporting something that the organization provides

#### **Custom Properties**

• isActive = False

### **Connections**

| Connector                           | Source                       | Target                   | Notes   |
|-------------------------------------|------------------------------|--------------------------|---|
| Association isOwnedBy Unspecified   | Public<br>AgencyVehicle      | Public<br>Agency         | Each AgencyVehicle always isOwnedBy one Agency. Each Agency sometimes owns one or more AgencyVehicle. |
| Association pertains To Unspecified | Public<br>AnnualVehicleUsage | Public<br>Agency Vehicle |   |

| Connector                                      | Source                      | Target                   | Notes  |
|--|-----------------------------|--------------------------|--|
| Association<br>isAffiliatedWith<br>Unspecified | Public<br>DispatchedUnit    | Public<br>Agency Vehicle | Each DispatchedUnit always isAffiliatedWith one AgencyVehicle. Each AgencyVehicle sometimes isAffiliatedWith one or more DispatchedUnit. |
| Association operates Unspecified               | Public<br>AgencyVehicleCrew | Public<br>AgencyVehicle  |  |

## **Attributes**

| Attribute              | Notes  | Constraints and tags                         |
|------------------------|--|--|
| identifier II          | The unique ID number of the unit which is        | Default:                                     |
| Private                | specific for each vehicle; typically the VIN     | NEMSIS Reference: { D06_01                   |
|                        | associated with the vehicle.                     | Unit/VehicleNumber }                         |
|                        |  |  |
| [01]                   |  |  |
|                        |  |  |
|                        |  |  |
| 4 G 1 GD               |  | D. C. I.                                     |
| typeCode CD            | A coded value specifying the kind of vehicle of  | Default:                                     |
| Private                | unit (ambulance, firetruck, etc.).               | NEMSIS Reference: { D06_03<br>Vehicle Type } |
|                        |  | venicle Type }                               |
| [01]                   |  |  |
| [05]                   |  |  |
|                        |  |  |
|                        |  |  |
| initialCostQuantity MO | The initial cost of the item excluding all       | Default:                                     |
| Private                | medical and other equipment not associated       | NEMSIS Reference: { D06_06                   |
|                        | with the item operation. This cost should be     | Vehicle Initial Cost }                       |
| Collection             | inclusive of all sources of funding including    |  |
| [01]                   | grants, donations, and any other capital.        |  |
|                        |  |  |
|                        |  |  |
| modelYear TS           | The year the vehicle was manufactured. This is   | Default:                                     |
| Private                | defined by the year of the VIN, understanding    | NEMSIS Reference: { D06_07                   |
| 1111400                | that some parts of the unit may not be original. | Vehicle Model Year }                         |
| Collection             | Parts of the time may not be original.           | ,      |
| [01]                   |  |  |
|                        |  |  |
|                        |  |  |
|                        |  |  |

# AgencyVehicleCrew

Type:

<u>Class</u>
Proposed. Version 1.0. Phase 1.0.
D06 Vehicle <u>Keywords</u>: Status:

Package:

*Detail: Created on 5/30/2009. Last modified on 5/30/2009. GUID:* {48934C47-512B-4111-96A0-E72D5831A53D}

### **Custom Properties**

• isActive = False

#### **Connections**

| Connector                   | Source            | Target        | Notes |
|-----------------------------|-------------------|---------------|-------|
| <b>Association</b> operates | Public            | Public        |       |
| Unspecified                 | AgencyVehicleCrew | AgencyVehicle |       |
|                             |                   |               |       |

#### Attributes

| Attribute                 | Notes   | Constraints and tags               |
|---------------------------|---|------------------------------------|
| stateCertificationLevelCo | A coded value specifying the personnel          | Default:                           |
| de CD                     | certification/licensure level of the personnel. | NEMSIS Reference: { D06_04 State   |
| Private                   |   | Certification/Licensure LevelsCode |
|                           |   | }                                  |
| 50.43                     |   |                                    |
| [01]                      |   |                                    |
|                           |   |                                    |
| 10                        |   |                                    |
| personelQuantity PQ       | The number of each personnel level associated   | Default:                           |
| Private                   | with the vehicle crew.                          | NEMSIS Reference: { D06_05         |
|                           |   | Number Of Each Personnel Level     |
| 50.43                     |   | On The Vehicle Crew }              |
| [01]                      |   |                                    |
|                           |   |                                    |
|                           |   |                                    |
|                           |   |                                    |

### AnnualVehicleUsage

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: D06 Vehicle Keywords:

Detail: Created on 5/30/2009. Last modified on 6/3/2009. GUID: {F61B089B-7359-4990-869A-522AB82DA8F1}

details pertaining to how offten the vehicle was used durring a year

### **Custom Properties**

• isActive = False

### **Connections**

| Connector                     | Source             | Target        | Notes |
|-------------------------------|--------------------|---------------|-------|
| <b>Association</b> pertainsTo | Public             | Public        |       |
| Unspecified                   | AnnualVehicleUsage | AgencyVehicle |       |
|                               |                    |               |       |

#### Attributes

| Attribute                  | Notes   | Constraints and tags   |
|----------------------------|---|--|
| usageYear TS<br>Private    | The year the data was collected for the annual vehicle usage.                       | Default: NEMSIS Reference: { D06_08 Year Miles/Hours Accured } |
| [01]                       |   |  |
| hourQuantity PQ<br>Private | The number of hours the vehicle was in service for the agency for the defined year. | Default: NEMSIS Reference: { D06_09 Annual Vehicle Hours }     |
| [01]                       |   |  |
| odometerReadingQuantit     |   | Default:   |
| y PQ                       | in service for the agency for the defined year                                      | NEMSIS Reference: { D06_10                                     |
| Private                    | (Odometer Reading).   | Annual Vehicle Miles }   |
| [01]                       |   |  |

# **D07 EMSPersonnel**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Agency Demographic SIM

Detail: Created on 5/16/2009. Last modified on 6/1/2009 GUID: {9C26A374-DA3B-4509-8EAD-11FCAE7234BD}

 $\underline{\mathbf{EMSPersonnel}} \text{ - } (Logical\ diagram)$ 

Created By: Salimah Shakir on 5/16/2009

Last Modified: 7/14/2009 Version: 1.0. Locked: False

*GUID*: {87FBC71A-ED22-4593-96D6-31CAC97223A2}

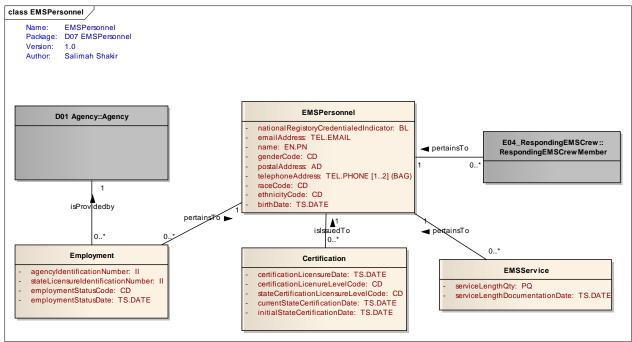


Figure: 25

### Certification

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0. Package: D07 EMSPersonnel Keywords:

Detail: Created on 4/23/2009. Last modified on 6/3/2009. GUID: {51E6754A-CAEE-4373-B68F-6AD0109E8E6F}

to recognize as having met special qualifications (as of a governmental agency or professional board) within a field

### **Custom Properties**

• isActive = False

#### **Connections**

| Connector                          | Source                  | Target                 | Notes |
|------------------------------------|-------------------------|------------------------|-------|
| Association isIssuedTo Unspecified | Public<br>Certification | Public<br>EMSPersonnel |       |
|                                    |                         |                        |       |

| Attribute | Notes | Constraints and tags |
|-----------|-------|----------------------|

| Attribute  | Notes  | Constraints and tags  |
|--|--|---|
| certificationLicensureDat<br>e TS.DATE<br>Private      | The date that the Certification/Licensure was achieved.                            | Default: NEMSIS Reference: { D07_06 Date of Personnel's Certification or Licensure for Agency } |
| certificationLicenureLeve<br>ICode CD<br>Private       | A coded value specifying the personnel's highest level of certification or license | Default: NEMSIS Reference: { D07_05 Personnel's Level of Certification/ Licensure for Agency }  |
| stateCertificationLicensu<br>reLevelCode CD<br>Private | A coded value specifying the personnel's highest State EMS Certification level.    | Default: NEMSIS Reference: { D08_15 State EMS Certification Licensure Level }                   |
| currentStateCertification Date TS.DATE Private         | The date of the personnel's current certification.                                 | Default: NEMSIS Reference: { D08_17 State EMS Current Certification Date }                      |
| initialStateCertificationD<br>ate TS.DATE<br>Private   | The certification date of personnel's current State certification.                 | Default: NEMSIS Reference: { D08_18 Initial State Certification Date }                          |

### **EMSPersonnel**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0. Package: D07 EMSPersonnel Keywords:

Detail: Created on 4/23/2009. Last modified on 6/3/2009. GUID: {1188C838-D3DF-4509-B344-9F86F7A49869}

An employee of the EMS

# **Custom Properties**

• isActive = False

### **Connections**

| Connector                       | Source            | Target       | Notes                      |
|---------------------------------|-------------------|--------------|----------------------------|
| <b>Association</b> pertainsTo   | Public            | Public       |                            |
| Unspecified                     | EMSService        | EMSPersonnel |                            |
| <b>Association</b> is Issued To | Public            | Public       |                            |
| Unspecified                     | Certification     | EMSPersonnel |                            |
| Association pertainsTo          | Public            | Public       |                            |
| Unspecified                     | Employment        | EMSPersonnel |                            |
| Association pertainsTo          | Public            | Public       | Each                       |
| Unspecified                     | RespondingEMSCrew | EMSPersonnel | RespondingEMSCrewMember    |
|                                 | Member            |              | always pertainsTo one      |
|                                 |                   |              | EMSPersonel.               |
|                                 |                   |              | Each EMSPersonel sometimes |
|                                 |                   |              | isTheSubjectOf one or more |
|                                 |                   |              | RespondingEMSCrewMember.   |
|                                 |                   |              |                            |

| Attribute  | Notes   | Constraints and tags   |
|--|---|--|
| nationalRegistoryCreden<br>tialedIndicator BL<br>Private | Indication of National Registry Credential for<br>the level of Certification/Licensure.                           | Default: NEMSIS Reference: { D08_16 }  |
| emailAddress<br>TEL.EMAIL<br>Private                     | Identifies a location to which e-mail messages can be recieved and/ or delivered for the Agency Medical Director. | Default: NEMSIS Reference: { D08_10 EMS Personnel's Email Address }  |
| name EN.PN<br>Private                                    | A non-unique textual identifier that constitutes the distinctive designation of the EMSPersonnel.                 | Default: NEMSIS Reference: { D08_01 EMS Personnel's Last Name } NEMSIS Reference: { D08_03 EMS Personnel's First Name } NEMSIS Reference: { D08_02 EMS Personnel's Middle Name/Initial } |

| Attribute   | Notes  | Constraints and tags  |
|---|--|---|
| genderCode CD<br>Private                            | A coded value specifying the gender of the EMS personnel.  | Default: NEMSIS Reference: { D08_12 EMS Personnel's Gender }  |
| postalAddress AD<br>Private                         | The identifieg mailing location for EMS personnel. This Includes street, city, state, and postal code. | Default: NEMSIS Reference: { D08_04 EMS Personnel's Mailing Address } NEMSIS Reference: { D08_05 EMS Personnel's City of Residence } NEMSIS Reference: { D08_06 EMS Personnel's State } NEMSIS Reference: { D08_07 EMS Personnel's ZIP Code } |
| telephoneAddress TEL.PHONE Private  Collection [12] | A number assigned to a telephone line for a specific location that is used to call that EMS personnel. | Default: NEMSIS Reference: { D08_08 EMS Personnel's Work Telephone } NEMSIS Reference: { D08_09 EMS Personnel's Home Telephone }  |
| raceCode CD<br>Private                              | A coded value specifying race of the EMS personnel.  | Default: NEMSIS Reference: { D08_13 EMS Personnel's Race }  |
| ethnicityCode CD<br>Private                         | A coded value specifying the ethnicity of the EMS personnel.   | Default: NEMSIS Reference: { D08_14 EMS Personnel's Ethnicity }   |
| birthDate TS.DATE Private                           | The date, month, and year of birth for the EMS personnel.  | Default: NEMSIS Reference: { D08_11 EMS Personnel's Date Of Birth }   |

### **EMSService**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0. Package: D07 EMSPersonnel Keywords:

*Detail: Created on 4/23/2009. Last modified on 6/3/2009. GUID:* {90F0E6D1-8969-41ae-9B29-87A6DDB9C99D}

Details of services and procedures provided by the EMS

### **Custom Properties**

• isActive = False

**Connections** 

| Connector                     | Source     | Target       | Notes |
|-------------------------------|------------|--------------|-------|
| <b>Association</b> pertainsTo | Public     | Public       |       |
| Unspecified                   | EMSService | EMSPersonnel |       |
|                               |            |              |       |

### **Attributes**

| Attribute              | Notes                                      | Constraints and tags            |
|------------------------|--|---------------------------------|
| serviceLengthQty PQ    | The EMS personnel's total length of active | Default:                        |
| Private                | service at any level.                      | NEMSIS Reference: { D08_19      |
|                        |  | Total Length of Service }       |
|                        |  |                                 |
|                        |  |                                 |
|                        |  |                                 |
|                        |  |                                 |
| serviceLengthDocumenta | The date which the length of service was   | Default:                        |
| tionDate TS.DATE       | documented.                                | NEMSIS Reference: { D08_20 Date |
| Private                |  | Length of Service Documented }  |
|                        |  |                                 |
|                        |  |                                 |
|                        |  |                                 |
|                        |  |                                 |
|                        |  |                                 |

### **Employment**

Type: <u>Class</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: D07 EMSPersonnel Keywords:

 Detail:
 Created on 4/23/2009. Last modified on 6/3/2009.

 GUID:
 {DA5984EB-25A3-4aff-8EA9-A2DF1CA3A8DE}

the work status of personnel

### **Custom Properties**

• isActive = False

### **Connections**

| Connector                     | Source     | Target       | Notes                          |
|-------------------------------|------------|--------------|--------------------------------|
| <b>Association</b>            | Public     | Public       | Each Employment always         |
| isProvidedby                  | Employment | Agency       | isProvidedBy one Agency.       |
| Unspecified                   |            |              | Each Agency sometimes provides |
|                               |            |              | one or more Employment.        |
|                               |            |              |                                |
| <b>Association</b> pertainsTo | Public     | Public       |                                |
| Unspecified                   | Employment | EMSPersonnel |                                |
|                               |            |              |                                |

| Attribute  | Notes   | Constraints and tags  |
|--|---|---|
| agencyIdentificationNum<br>ber II<br>Private         | ID number for personnel assigned by agency.                                       | Default: NEMSIS Reference: { D07_01 Personnel's Agency ID Number }  |
| stateLicensureIdentificati<br>onNumber II<br>Private | The state certification/licensure ID number assigned to the personnel.            | Default: NEMSIS Reference: { D07_02 State/Licensure ID Number }     |
| employmentStatusCode<br>CD<br>Private                | A coded value specifying the personnel's employment status for a specific agency. | Default: NEMSIS Reference: { D07_03 Personnel's Employment Status } |
| employmentStatusDate<br>TS.DATE<br>Private           | The date of the personnel's employment status for a specific agency.              | Default: NEMSIS Reference: { D07_04 Employment Status Date }        |

### **D09 Device**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Agency Demographic SIM

Detail: Created on 6/16/2009. Last modified on 6/16/2009 GUID: {4FA635EF-0C5B-409d-BFF1-5F8AEF5F1FEF}

**<u>D09 Device</u>** - (Logical diagram)

Created By: AbdulMalik Shakir on 6/16/2009

*Last Modified:* 6/16/2009

Version: 1.0. Locked: False

GUID: {A1B0F250-C4EB-4ded-A969-3482DCF2B532}

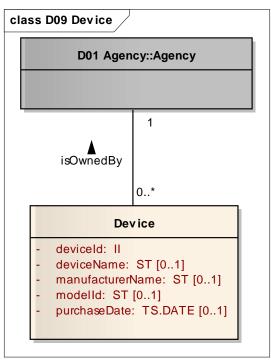


Figure: 26

#### **Device**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: D09 Device Keywords:

*Detail: Created on 6/16/2009. Last modified on 6/16/2009. GUID:* {8B4DAB0D-91C7-4dd2-A0D2-328943A084BE}

# **Custom Properties**

• isActive = False

### **Connections**

| Connector                    | Source | Target | Notes                          |
|------------------------------|--------|--------|--------------------------------|
| <b>Association</b> isOwnedBy | Public | Public | Each Device always isOwnedBy   |
| Unspecified                  | Device | Agency | one Agency.                    |
|                              |        |        | Each Agency sometimes owns one |
|                              |        |        | or more Device.                |
|                              |        |        |                                |

| Attribute              | Notes   | Constraints and tags                                       |
|------------------------|---|--|
| deviceId II<br>Private | The serial number for a specific medical device.  | Default: NEMSIS Reference: { D09_01 Device Serial Number } |
| deviceName ST          | A word or phrase that constitutes the distinctive | Default:   |
| Private                | designation of a person or thing.                 | NEMSIS Reference: { D09_02<br>Device Name Or Id }          |
| [01]                   |   |  |
| manufacturerName ST    | A word or phrase that constitutes the distinctive | Default:   |
| Private                | designation of a person or thing.                 | NEMSIS Reference: { D09_03<br>Device Manufacturer }        |
| [01]                   |   |  |
| modelId ST             | The specific manufacturer's model number          | Default:   |
| Private                | associated with medical device.                   | NEMSIS Reference: { D09_04<br>Model Number }               |
| [01]                   |   |  |
|                        |   |  |

| Attribute            | Notes                              | Constraints and tags       |
|----------------------|------------------------------------|----------------------------|
| purchaseDate TS.DATE | The date the device was purchased. | Default:                   |
| Private              |                                    | NEMSIS Reference: { D09_05 |
|                      |                                    | Device Purchase Date }     |
|                      |                                    |                            |
| [01]                 |                                    |                            |
|                      |                                    |                            |
|                      |                                    |                            |
|                      |                                    |                            |

### **EMS SIM**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Static Information Model

*Detail:* Created on 6/16/2009. Last modified on 6/16/2009 GUID: {0259C233-A3FE-4d93-A3F6-23A0CC96D591}

# EMS SIM Class Diagram - (Logical diagram)

Created By: Salimah Shakir on 6/30/2009

*Last Modified:* 7/14/2009

Version: 1.0. Locked: False

*GUID*: {1F1D53B2-D8EB-46c2-B8CB-CC7AA77CD446}

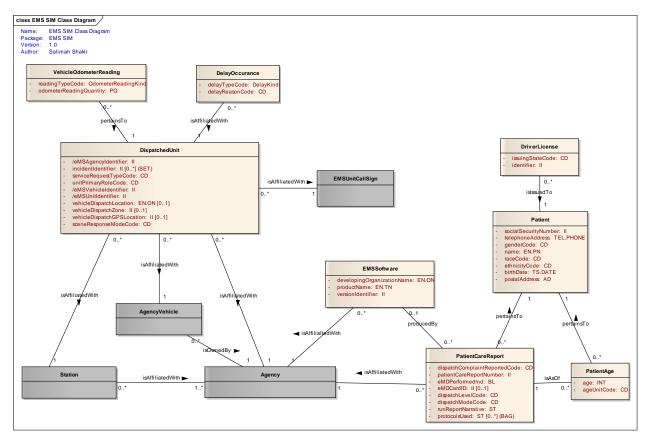


Figure: 27

### $\underline{\mathbf{EMS\ SIM\ Package\ Diagram}} - (Package\ diagram)$

Created By: Salimah Shakir on 6/16/2009

*Last Modified:* 8/12/2009

*Version:* 1.0. *Locked:* False

*GUID:* {B65340C7-E0C8-4541-959D-D1AA5192E1C5}

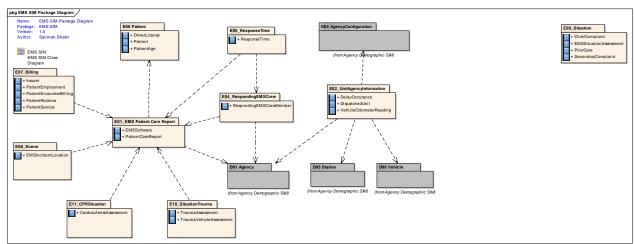


Figure: 28

### EMS SIM: EMS SIM Class Diagram

*Type:* Text

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS SIM Keywords:

*Detail: Created on 6/30/2009. Last modified on 6/30/2009. GUID:* {EAB5F527-6BF3-46cd-A95F-0FDC90732C9E}

EMS SIM: EMS SIM Class Diagram

# E01\_EMS Patient Care Report

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS SIM

Detail: Created on 6/30/2009. Last modified on 6/30/2009 GUID: {922671D6-1E33-4b4a-B004-415DA0625671}

### **E01\_EMS Patient Care Report** - (Logical diagram)

Created By: Salimah Shakir on 6/30/2009

*Last Modified:* 8/25/2009

Version: 1.0. Locked: False

### GUID: {5EB1A437-1821-44a8-8CD9-6EA77F16BC6C}

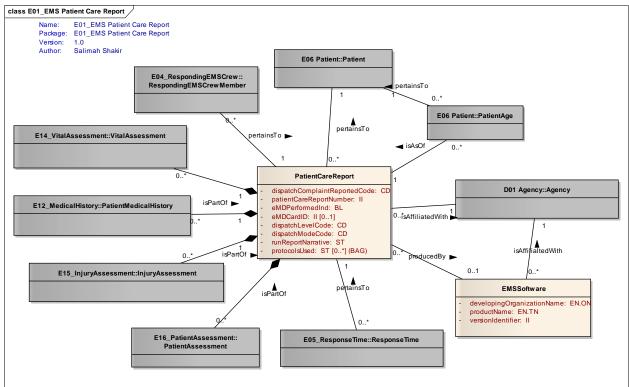


Figure: 29

### **EMSSoftware**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: E01\_EMS Patient Care Report Keywords:

Detail: Created on 6/29/2009. Last modified on 7/28/2009. GUID: {1B5AF9A8-D9A8-4113-B7F8-54C34C5DCF8E}

#### **Custom Properties**

• isActive = False

| Connections                   |                   |             |       |
|-------------------------------|-------------------|-------------|-------|
| Connector                     | Source            | Target      | Notes |
| <b>Association</b> producedBy | Public            | Public      |       |
| Unspecified                   | PatientCareReport | EMSSoftware |       |
|                               |                   |             |       |
| <u>Association</u>            | Public            | Public      |       |
| isAffilialtedWith             | EMSSoftware       | Agency      |       |
| Unspecified                   |                   |             |       |

| Connector | Source | Target | Notes |
|-----------|--------|--------|-------|
|           |        |        |       |

### <u>Attributes</u>

| Attribute                                       | Notes   | Constraints and tags                                   |
|---|---|--|
| developingOrganizationN<br>ame EN.ON<br>Private | The name of the software vendor by whom the data collection software was developed. | Default: NEMSIS Reference: { E01_02 Software Creator } |
| productName EN.TN<br>Private                    | The name of the software package with which the data was collected by the agency    | Default: NEMSIS Reference: { E01_03 Software Name }    |
| versionIdentifier II<br>Private                 | The version of the software used by the agency to collect the data                  | Default: NEMSIS Reference: { E01_04 Software Version } |

# **PatientCareReport**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: E01\_EMS Patient Care Report Keywords:

Detail: Created on 6/30/2009. Last modified on 6/30/2009. GUID: {F9C5469D-3616-416a-8A72-BF14791B2DA2}

### **Custom Properties**

• isActive = False

| Connector   | Source                | Target            | Notes |
|-------------|-----------------------|-------------------|-------|
| Association | Public                | Public            |       |
| Unspecified | CardiacArrestAssessme | PatientCareReport |       |
|             | nt                    |                   |       |

| Connector                           | Source                               | Target                      | Notes  |
|-------------------------------------|--------------------------------------|-----------------------------|--|
| Association<br>Unspecified          | Public<br>PatientEncounterBilling    | Public<br>PatientCareReport |  |
| Association pertains To Unspecified | Public<br>ResponseTime               | Public<br>PatientCareReport | Each ResponseTime always pertainsTo one PatientCareReport. Each PatientCareReport sometimes isTheSubjetOf one or more ResponseTime.              |
| Association<br>Unspecified          | Public<br>EMSIncidentLocation        | Public<br>PatientCareReport |  |
| Association<br>Unspecified          | Public<br>EMSSituationAssessme<br>nt | Public<br>PatientCareReport |  |
| Association<br>Unspecified          | Public<br>TraumaAssessment           | Public<br>PatientCareReport |  |
| Association isPartOf Unspecified    | Public<br>InjuryAssessment           | Public<br>PatientCareReport | Each InjuryAssessment always is part of one PatientCareReport Each PatientCareReport sometimes includes one or more InjuryAssessment             |
| Association isPartOf Unspecified    | Public<br>PatientMedicalHistory      | Public<br>PatientCareReport | Each MedicalHistory always is part of one PatientCareReport. Each PatientCareReport sometimes includes one or more MedicalHistory.               |
| Association isPartOf Unspecified    | Public<br>PatientAssessment          | Public<br>PatientCareReport | Each Assessment always is part of one PatientCareReport. Each PatientCareReport sometimes includes one or more Assessment.                       |
| Association isPartOf Unspecified    | Public<br>VitalAssessment            | Public<br>PatientCareReport | Each Assessment/VitalSigns always is part of one PatientCareReport. Each PatientCareReport sometimes includes one or more Assessment/VitalSigns. |
| Association is AsOf Unspecified     | Public<br>PatientAge                 | Public<br>PatientCareReport | Each PatientAge always isAsOf one PatientCareReport. Each PatientCareReport sometimes isReferencePointFor one or more PatientAge.                |
| Association producedBy Unspecified  | Public<br>PatientCareReport          | Public<br>EMSSoftware       |  |
| Association pertainsTo              | Public                               | Public                      | Each PatientCareReport always  |

| Connector              | Source            | Target            | Notes                               |
|------------------------|-------------------|-------------------|-------------------------------------|
| Unspecified            | PatientCareReport | Patient           | pertains to one Patient.            |
|                        |                   |                   | Each Patient sometimes is the       |
|                        |                   |                   | subjet of one or more               |
|                        |                   |                   | PatientCareReport.                  |
| Association            | Public            | Public            | Each PatientCareReport always       |
| isAffiliatedWith       | PatientCareReport | Agency            | isAffiliatedWith one Agency.        |
| Unspecified            |                   |                   | Each Agency sometimes               |
|                        |                   |                   | isAffiliatedWith one or more        |
|                        |                   |                   | PatientCareReport.                  |
| Association pertainsTo | Public            | Public            | Each                                |
| Unspecified            | RespondingEMSCrew | PatientCareReport | RespondingEMSCrewMember             |
|                        | Member            |                   | always pertainsTo one               |
|                        |                   |                   | PatientCareReport.                  |
|                        |                   |                   | Each PatientCareReport sometimes    |
|                        |                   |                   | isTheSubjectOf one or more          |
|                        |                   |                   | $Responding EMS Crew Member \ . \\$ |
|                        |                   |                   |                                     |

<u>Attributes</u>

| Attribute                                       | Notes   | Constraints and tags   |
|---|---|--|
| dispatchComplaintRepor<br>tedCode CD<br>Private | The complaint dispatch reported to the responding unit.   | Default: NEMSIS Reference: { E03_01 Complaint Reported by Dispatch } |
| patientCareReportNumb<br>er II<br>Private       | The unique number automatically assigned by the EMS agency for each patient care report (PCR). This is a unique number to the EMS agency for all of time. | Default: NEMSIS Reference: { E01_01 Patient Care Report Number }     |
| eMDPerformedInd BL<br>Private                   | Indication of whether EMD was performed for this EMS event.   | Default: NEMSIS Reference: { E03_02 EMD Performed }                  |

| Attribute   | Notes  | Constraints and tags                                       |
|---|--|--|
| eMDCardID II<br>Private<br>[01]                   | The EMD card number reported by dispatch, consisting of the card number, dispatch level, and dispatch mode | Default: NEMSIS Reference: { E03_03 EMD Card Number }      |
| dispatchLevelCode CD<br>Private                   |  | Default: NEMSIS Reference: { E03_03 EMD Card Number }      |
| dispatchModeCode CD<br>Private                    |  | Default: NEMSIS Reference: { E03_03 EMD Card Number }      |
| runReportNarrative ST<br>Private                  | The narrative of the run report  | Default: NEMSIS Reference: { E13_01 Run Report Narrative } |
| protocolsUsed ST<br>Private<br>Collection<br>[0*] | The protocol used by EMS personnel to direct the clinical care of the patient                              | Default: NEMSIS Reference: { E17_01 Protocols Used }       |

# E02\_UnitAgencyInformation

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS SIM

Detail: Created on 6/29/2009. Last modified on 6/29/2009 GUID: {89F550EC-1118-4a04-988B-CBC20AA27444}

### $\underline{\textbf{E02\_UnitAgencyInformation}} \text{ - } (Logical\ diagram)$

Created By: Salimah Shakir on 6/29/2009

*Last Modified:* 7/14/2009

Version: 1.0. Locked: False

GUID: {7F75B4D8-3EF6-4f7d-BFCD-B1781725C878}

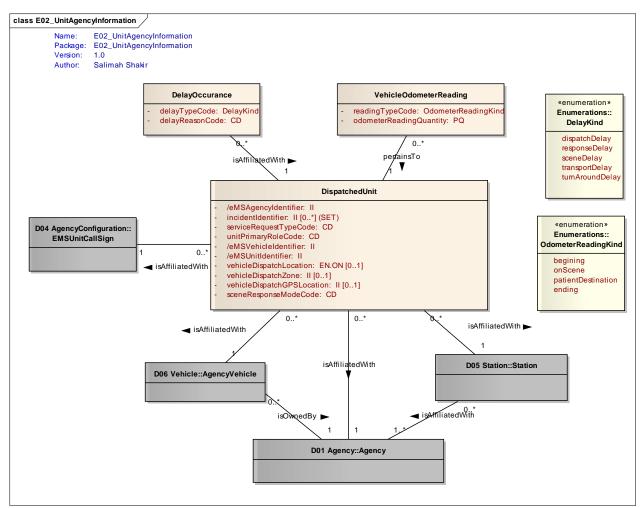


Figure: 30

### **DelayOccurance**

Type: <u>Class</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: E02\_UnitAgencyInformation Keywords:

Detail: Created on 6/29/2009. Last modified on 6/29/2009. GUID: {118C9230-FD7B-46d2-8715-2E855E0C2F23}

### **Custom Properties**

• isActive = False

### **Connections**

| Connector        | Source         | Target         | Notes                         |
|------------------|----------------|----------------|-------------------------------|
| Association      | Public         | Public         | Each DelayOccurance always    |
| isAffiliatedWith | DelayOccurance | DispatchedUnit | isAffiliatedWith one          |
| Unspecified      |                |                | DispatchedUnit.               |
|                  |                |                | Each DispatchedUnit sometimes |
|                  |                |                | isAffiliatedWith one or more  |
|                  |                |                | DelayOccurance.               |
|                  |                |                |                               |

### **Attributes**

| Attribute                             | Notes | Constraints and tags   |
|---------------------------------------|-------|--|
| delayTypeCode<br>DelayKind<br>Private |       | Default:   |
| delayReasonCode CD<br>Private         |       | Default:  NEMSIS Reference: { E02_06 Type of Dispatch Delay }  NEMSIS Reference: { E02_07 Type of Response Delay }  NEMSIS Reference: { E02_08 Type of Scene Delay }  NEMSIS Reference: { E02_10 Type of Turn-Around Delay }  NEMSIS Reference: { E02_10 Type of Turn-Around Delay }  NEMSIS Reference: { E02_09 Type of Transport Delay } |

# DispatchedUnit

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: E02\_UnitAgencyInformation Keywords:

Detail: Created on 6/29/2009. Last modified on 7/1/2009. GUID: {7673D942-67B8-448e-85F5-12D75FFA0591}

### **Custom Properties**

• isActive = False

**Connections** 

| Connector  | Source                               | Target                    | Notes   |
|--|--------------------------------------|---------------------------|---|
| Association is Affiliated With Unspecified       | Public<br>DispatchedUnit             | Public<br>Agency          | Each DispatchedUnit always isAffiliatedWith one Agency. Each Agency sometimes isAffiliatedWith one or more DispatchedUnit.                        |
| Association is Affiliated With Unspecified       | Public<br>DispatchedUnit             | Public<br>EMSUnitCallSign | Each DispatchedUnit always isAffiliatedWith one EMSUnitCallSign. Each EMSUnitCallSign sometimes isAffiliatedWith one or more DispatchedUnit.      |
| Association<br>is Affiliated With<br>Unspecified | Public<br>DelayOccurance             | Public<br>DispatchedUnit  | Each DelayOccurance always isAffiliatedWith one DispatchedUnit. Each DispatchedUnit sometimes isAffiliatedWith one or more DelayOccurance.        |
| Association pertains To Unspecified              | Public<br>VehicleOdometerReadi<br>ng | Public<br>DispatchedUnit  | Each VehicleOdometerReading always pertainsTo one DispatchedUnit. Each DispatchedUnit sometimes isTheSourceOf one or more VehicleOdometerReading. |
| Association<br>is Affiliated With<br>Unspecified | Public<br>DispatchedUnit             | Public<br>AgencyVehicle   | Each DispatchedUnit always isAffiliatedWith one AgencyVehicle. Each AgencyVehicle sometimes isAffiliatedWith one or more DispatchedUnit.          |
| Association is Affiliated With Unspecified       | Public<br>DispatchedUnit             | Public<br>Station         | Each DispatchedUnit always is AffiliatedWith one Station. Each Station sometimes is AffiliatedWith one or more DispatchedUnit.                    |

| Attribute              | Notes                                     | Constraints and tags           |
|------------------------|---|--------------------------------|
| eMSAgencyIdentifier II | The state-assigned provider number of the | Default:                       |
| Private                | responding agency                         | NEMSIS Reference: { E02_01 EMS |
|                        |   | Agency Number }                |
|                        |   |                                |
|                        |   |                                |
|                        |   |                                |
|                        |   |                                |

| Attribute                                      | Notes   | Constraints and tags  |
|--|---|---|
| incidentIdentifier II Private  Collection [0*] | The incident number assigned by the 911 Dispatch System   | Default: NEMSIS Reference: { E02_02 Incident Number } NEMSIS Reference: { E02_03 EMS Unit (Vehicle) Response Number } |
| serviceRequestTypeCode                         | The type of service or category of service  | Default:  |
| CD<br>Private                                  | requested of the EMS service responding for this specific EMS incident.   | <u>NEMSIS Reference</u> : { E02_04 Type of Service Requested }  |
| unitPrimaryRoleCode<br>CD<br>Private           | The primary role of the EMS service which was requested for this specific EMS incident.   | Default: NEMSIS Reference: { E02_05 Primary Role of the Unit }  |
| eMSVehicleIdentifier II<br>Private             | The unique physical vehicle number of the responding unit   | Default: NEMSIS Reference: { E02_11 EMS Unit/Vehicle Number }   |
| eMSUnitIdentifier II<br>Private                | The EMS unit number used to dispatch and communicate with the unit. This may be the same as the EMS Unit/Vehicle Number in many agencies. | Default: NEMSIS Reference: { E02_12 EMS Unit Call Sign (Radio Number) }   |
| vehicleDispatchLocation                        | The station (or hospital) name representing the   | Default:  |
| EN.ON<br>Private                               | geographic location of the vehicle at the time of dispatch  | NEMSIS Reference: { E02_13<br>Vehicle Dispatch Location }   |
| [01]   |   |   |

| Attribute                                    | Notes   | Constraints and tags  |
|--|---|---|
| vehicleDispatchZone II Private  [01]         | Geographic zone representing the location of the responding vehicle at the time of dispatch.    | Default: NEMSIS Reference: { E02_14 Vehicle Dispatch Zone }         |
| vehicleDispatchGPSLoca<br>tion II<br>Private | The GPS coordinates associated with the EMS unit at the time of dispatch.                       | Default: NEMSIS Reference: { E02_15 Vehicle Dispatch GPS Location } |
| sceneResponseModeCode<br>CD<br>Private       | Indication whether or not lights and/or sirens were used on the vehicle on the way to the scene | Default: NEMSIS Reference: { E02_20 Response Mode to Scene }        |

### VehicleOdometerReading

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: E02\_UnitAgencyInformation Keywords:

 Detail:
 Created on 6/29/2009. Last modified on 6/29/2009.

 GUID:
 {8742BC36-6E98-4f46-A37B-2AA1B234CA3C}

### **Custom Properties**

• isActive = False

| Connections                   |                      |                |                               |
|-------------------------------|----------------------|----------------|-------------------------------|
| Connector                     | Source               | Target         | Notes                         |
| <b>Association</b> pertainsTo | Public               | Public         | Each VehicleOdometerReading   |
| Unspecified                   | VehicleOdometerReadi | DispatchedUnit | always pertainsTo one         |
|                               | ng                   |                | DispatchedUnit.               |
|                               |                      |                | Each DispatchedUnit sometimes |
|                               |                      |                | isTheSourceOf one or more     |
|                               |                      |                | VehicleOdometerReading.       |
|                               |                      |                |                               |

#### Attributes

| Attribute                                   | Notes | Constraints and tags   |
|---|-------|--|
| readingTypeCode OdometerReadingKind Private |       | Default:   |
| odometerReadingQuantit<br>y PQ<br>Private   |       | Default: NEMSIS Reference: { E02_16 Begining Odometer Reading of Responding Vehicle } NEMSIS Reference: { E02_17 On- Scene Odometer Reading of Responding Vehicle } NEMSIS Reference: { E02_18 Patient Destination Odometer Reading of Responding Vehicle } NEMSIS Reference: { E02_19 Ending Odometer Reading of Responding Vehicle } |

# E04\_RespondingEMSCrew

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS SIM

Detail: Created on 7/14/2009. Last modified on 7/14/2009 GUID: {5E8EA434-E4F2-4136-B38B-A11C3E439F85}

Responding EMSCrew - (Logical diagram)
Created By: Salimah Shakir on 7/14/2009

*Last Modified:* 7/14/2009

Version: 1.0. Locked: False

GUID: {32DE016C-B3D7-4fe5-99D7-315171C90952}

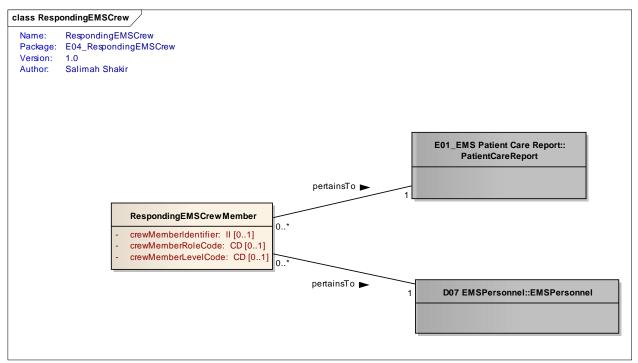


Figure: 31

# RespondingEMSCrewMember

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0. Package: E04\_RespondingEMSCrew Keywords:

Detail: Created on 7/14/2009. Last modified on 7/14/2009. GUID: {B0413AF3-86A4-4f6a-AC42-550E60DD2F3E}

### **Custom Properties**

• isActive = False

| Connector                     | Source            | Target            | Notes                            |
|-------------------------------|-------------------|-------------------|----------------------------------|
| Association pertainsTo        | Public            | Public            | Each                             |
| Unspecified                   | RespondingEMSCrew | PatientCareReport | RespondingEMSCrewMember          |
|                               | Member            |                   | always pertainsTo one            |
|                               |                   |                   | PatientCareReport.               |
|                               |                   |                   | Each PatientCareReport sometimes |
|                               |                   |                   | isTheSubjectOf one or more       |
|                               |                   |                   | RespondingEMSCrewMember .        |
|                               |                   |                   |                                  |
| <b>Association</b> pertainsTo | Public            | Public            | Each                             |
| Unspecified                   | RespondingEMSCrew | EMSPersonnel      | RespondingEMSCrewMember          |
|                               | Member            |                   | always pertainsTo one            |

| Connector | Source | Target | Notes                      |
|-----------|--------|--------|----------------------------|
|           |        |        | EMSPersonel.               |
|           |        |        | Each EMSPersonel sometimes |
|           |        |        | isTheSubjectOf one or more |
|           |        |        | RespondingEMSCrewMember.   |
|           |        |        |                            |

#### Attributes

| Attribute                                    | Notes   | Constraints and tags                                    |
|--|---|---|
| crewMemberIdentifier II Private [01]         | The State Certification/Licensure ID number assigned to the crew member     | NEMSIS Reference: { E04_01<br>Crew Memeber ID }         |
| crewMemberRoleCode CD Private  [01]          | The role of the crew member during transport of this call.                  | Default: NEMSIS Reference: { E04_02 Crew Member Role }  |
| crewMemberLevelCode<br>CD<br>Private<br>[01] | The functioning level of the crew member during this EMS patient encounter. | Default: NEMSIS Reference: { E04_03 Crew Member Level } |

# E05\_ResponseTime

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS SIM

 Detail:
 Created on 7/14/2009. Last modified on 7/14/2009

 GUID:
 {C2B5DDC9-4B0D-49fe-AED1-F14F6C15DE07}

 $\underline{\textbf{ResponseTime}} \text{ - } (Logical \ diagram)$ 

Created By: Salimah Shakir on 7/14/2009

Last Modified: 7/14/2009 Version: 1.0. Locked: False

GUID: {0B3038B6-49FF-40d1-9238-E0A6049362A6}

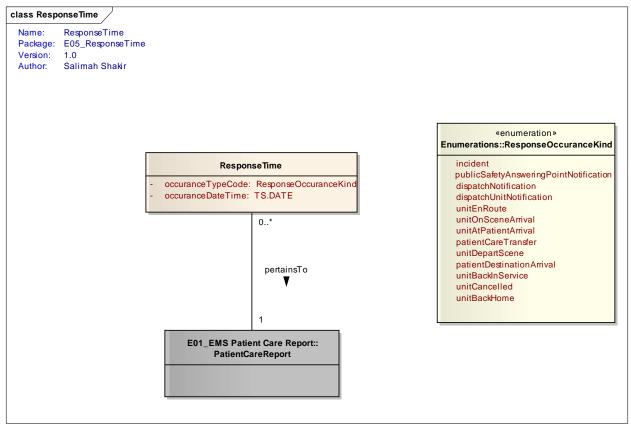


Figure: 32

### ResponseTime

Type: <u>Class</u>

Status:Proposed. Version 1.0. Phase 1.0.Package:E05\_ResponseTimeKeywords:

*Detail: Created on 7/14/2009. Last modified on 7/14/2009. GUID:* {DC8D26E5-EC9A-4211-B63D-DA81E00C07A5}

### **Custom Properties**

• isActive = False

| Connector                     | Source       | Target            | Notes                             |
|-------------------------------|--------------|-------------------|-----------------------------------|
| <b>Association</b> pertainsTo | Public       | Public            | Each ResponseTime always          |
| Unspecified                   | ResponseTime | PatientCareReport | pertainsTo one PatientCareReport. |
|                               |              |                   | Each PatientCareReport sometimes  |
|                               |              |                   | isTheSubjetOf one or more         |
|                               |              |                   | ResponseTime.                     |
|                               |              |                   |                                   |

### **Attributes**

| Attribute   | Notes | Constraints and tags   |
|---|-------|--|
| occuranceTypeCode<br>ResponseOccuranceKind<br>Private |       | Default:   |
| occuranceDateTime                                     |       | Default:   |
| TS.DATE   |       | NEMSIS Reference: { E05_01   |
| Private   |       | Incident or Onset Date/Time }  NEMSIS Reference: { E05_02} PSAP Call Date/Time }  NEMSIS Reference: { E05_03} Dispatch Notified Date/Time }  NEMSIS Reference: { E05_04 Unit} Notified by Dispatch Date/Time }  NEMSIS Reference: { E05_05 Unit} En Route Date/Time }  NEMSIS Reference: { E05_06 Unit} Arrived On Scene Date/Time }  NEMSIS Reference: { E05_07 Unit} Arrived At Patient Date/Time }  NEMSIS Reference: { E05_07 Unit} Arrived At Patient Date/Time }  NEMSIS Reference: { E05_09 Unit} Left Scene Date/Time }  NEMSIS Reference: { E05_09 Unit} Left Scene Date/Time }  NEMSIS Reference: { E05_10 Unit} Patient Arrived at Destination Date/Time }  NEMSIS Reference: { E05_11 Unit} Back in Service Date/Time }  NEMSIS Reference: { E05_12 Unit} Cancelled Date/Time }  NEMSIS Reference: { E05_13 Unit} Back Home Location Date/Time } |

# E06 Patient

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS SIM

Detail: Created on 5/16/2009. Last modified on 6/16/2009 GUID: {12768EFB-506C-4c6c-9F94-77FA5D061651}

**Patient** - (Logical diagram)

Created By: Salimah Shakir on 5/16/2009

*Last Modified:* 7/14/2009

Version: 1.0. Locked: False

GUID: {137CCA4B-3CC3-4347-AF56-564EB794CBFD}

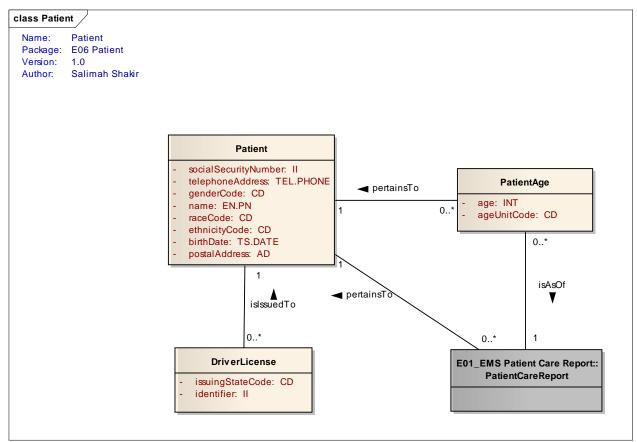


Figure: 33

#### **DriverLicense**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: E06 Patient Keywords:

 Detail:
 Created on 4/23/2009. Last modified on 6/3/2009.

 GUID:
 {11A8D635-AA99-4b50-A1A5-7A8ABA9DB254}

a license issued under governmental authority that permits the holder to operate a motor vehicle

### **Custom Properties**

• isActive = False

| Connector                     | Source        | Target  | Notes  |
|-------------------------------|---------------|---------|--|
| <b>Association</b> isIssuedTo | Public        | Public  | Each DriverLicense always  |
| Unspecified                   | DriverLicense | Patient | isIssuedTo one Patient. Each Patient sometimes issues one or more DriverLicense. |

#### Attributes

| Attribute                      | Notes                                      | <b>Constraints and tags</b>  |
|--------------------------------|--|--|
| issuingStateCode CD<br>Private | The state that issued the driver's license | Default: NEMSIS Reference: { E06_18 State Issuing Driver's Lisence } |
| identifier II<br>Private       | The patient's driver's license number      | Default: NEMSIS Reference: { E06_19 Driver's Lisence Number }        |

### **Patient**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: E06 Patient Keywords:

Detail: Created on 4/23/2009. Last modified on 6/3/2009. GUID: {BE4CE90F-0E07-4002-9EB3-A2F32E45DB47}

an individual awaiting or under medical care and treatment or the recipient of any of various personal services

### **Custom Properties**

• isActive = False

| Connector                     | Source        | Target  | Notes  |
|-------------------------------|---------------|---------|--|
| <b>Association</b> isIssuedTo | Public        | Public  | Each DriverLicense always                                |
| Unspecified                   | DriverLicense | Patient | isIssuedTo one Patient.                                  |
|                               |               |         | Each Patient sometimes issues one or more DriverLicense. |
| Association pertainsTo        | Public        | Public  | Each PatientAge always pertains to                       |
| Unspecified                   | PatientAge    | Patient | one Patient.   |

| Connector                           | Source                      | Target            | Notes   |
|-------------------------------------|-----------------------------|-------------------|---|
|                                     |                             |                   | Each Patient sometimes is the subjet of one or more PatientAge.   |
| Association pertains To Unspecified | Public<br>PatientCareReport | Public<br>Patient | Each PatientCareReport always pertains to one Patient. Each Patient sometimes is the subjet of one or more PatientCareReport. |

| Attribute                                | Notes   | Constraints and tags  |
|--|---|---|
| socialSecurityNumber II<br>Private       | The nine-digit number issued to U.S. citizens, permanent residents, and temporary (working) residents   | Default: NEMSIS Reference: { E06_10 Patient's Social Security Number }  |
| telephoneAddress<br>TEL.PHONE<br>Private | a number assigned to a telephone line for a specific location that is used to call that location  | Default: NEMSIS Reference: { E06_17 Primary or Home Telephone Number }  |
| genderCode CD<br>Private                 | either of the two major forms of individuals<br>that are distinguished respectively as female or<br>male especially on the basis of their<br>reproductive organs and structures | Default: NEMSIS Reference: { E06_11 Gender }  |
| name EN.PN<br>Private                    | a word or phrase that constitutes the distinctive designation of a person or thing  | Default:  NEMSIS Reference: { E06_01 Last Name }  NEMSIS Reference: { E06_02 First Name }  NEMSIS Reference: { E06_03 Middle Name } |

| Attribute                           | Notes  | Constraints and tags  |
|-------------------------------------|--|---|
| raceCode CD<br>Private              | a class or kind of people unified by shared interests, habits, or characteristics  | Default: NEMSIS Reference: { E06_12 Race }  |
| ethnicityCode CD<br>Private         | of or relating to large groups of people classed according to common racial, national, tribal, religious, linguistic, or cultural origin or background | Default: NEMSIS Reference: { E06_13 Ethnicity }   |
| <b>birthDate</b> TS.DATE<br>Private | The date, month, and year of birth   | Default: NEMSIS Reference: { E06_16 Date of Birth }   |
| postalAddress AD<br>Private         | the identifieg mailing location for a particular organization. includes street, city, state, and postal code   | Default:  NEMSIS Reference: { E06_04 Patient's Home Address }  NEMSIS Reference: { E06_05 Patient's Home City }  NEMSIS Reference: { E06_06 Patient's Home County }  NEMSIS Reference: { E06_07 Patient's Home State }  NEMSIS Reference: { E06_08 Patient's Home Zip Code }  NEMSIS Reference: { E06_09 Patient's Home Country } |

# **PatientAge**

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: E06 Patient Keywords:

Detail: Created on 4/23/2009. Last modified on 6/3/2009. GUID: {8984A1BA-7887-4999-B9B2-BDBA42EC11B9}

the time of life at which some particular qualification, power, or capacity arises or rests

### **Custom Properties**

### **Custom Properties**

• isActive = False

### **Connections**

| Connector                     | Source     | Target            | Notes                              |
|-------------------------------|------------|-------------------|------------------------------------|
| <b>Association</b> pertainsTo | Public     | Public            | Each PatientAge always pertains to |
| Unspecified                   | PatientAge | Patient           | one Patient.                       |
|                               |            |                   | Each Patient sometimes is the      |
|                               |            |                   | subjet of one or more PatientAge.  |
|                               |            |                   |                                    |
| <b>Association</b> isAsOf     | Public     | Public            | Each PatientAge always isAsOf      |
| Unspecified                   | PatientAge | PatientCareReport | one PatientCareReport.             |
|                               |            |                   | Each PatientCareReport sometimes   |
|                               |            |                   | isReferencePointFor one or more    |
|                               |            |                   | PatientAge.                        |
|                               |            |                   |                                    |

Attributes

| Attribute      | Notes   | Constraints and tags                   |
|----------------|---|--|
| age INT        | the time of life at which some particular         | Default:                               |
| Private        | qualification, power, or capacity arises or rests | NEMSIS Reference: { E06_14 Age         |
|                |   | }                                      |
|                |   |  |
|                |   |  |
|                |   |  |
|                |   |  |
| ageUnitCode CD | The units which the age is documented in          | Default:                               |
| Private        | (Hours, Days, Months, Years)                      | v                                      |
| riivate        | (Hours, Days, Monuis, Tears)                      | NEMSIS Reference: { E06_15 Age Units } |
|                |   | Omts }                                 |
|                |   |  |
|                |   |  |
|                |   |  |
|                |   |  |

# E07\_Billing

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS SIM

Detail: Created on 7/28/2009. Last modified on 7/28/2009 GUID: {39C80DBA-FFBE-49d8-9592-9033B8C32C76}

 $\underline{\textbf{E07\_Billing}} \text{ - } (Logical \ diagram)$ 

Created By: AbdulMalik Shakir on 7/28/2009

*Last Modified:* 7/28/2009

Version: 1.0. Locked: False

*GUID:* {BEBB14F0-FD65-4750-8878-0BC93ABFABD5}

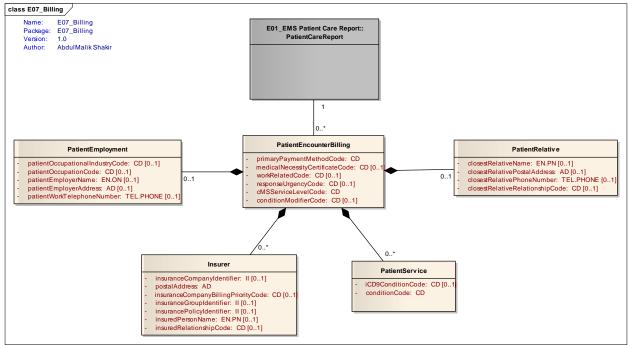


Figure: 34

### Insurer

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: E07\_Billing Keywords:

 Detail:
 Created on 7/28/2009. Last modified on 7/28/2009.

 GUID:
 {FB9AEB17-AC47-446c-A429-6E04AA02F5E4}

### **Custom Properties**

• isActive = False

### **Connections**

| Connector             | Source  | Target                  | Notes |
|-----------------------|---------|-------------------------|-------|
| <b>Aggregation</b>    | Public  | Public                  |       |
| Source -> Destination | Insurer | PatientEncounterBilling |       |
|                       |         |                         |       |

| Attribute Notes | Constraints and tags |
|-----------------|----------------------|
|-----------------|----------------------|

| Attribute   | Notes  | Constraints and tags   |
|---|--|--|
| insuranceCompanyIdenti<br>fier II<br>Private<br>[01]  | The ID number of the patient's insurance company         | <i>NEMSIS Reference</i> : { E07_03 Insurance Company ID/Name }   |
| postalAddress AD<br>Private                           | The mailing address.                                     | Default: NEMSIS Reference: { E07_05 Insurance Company Address } NEMSIS Reference: { E07_06 Insurance Company City } NEMSIS Reference: { E07_07 Insurance Company State } NEMSIS Reference: { E07_08 Insurance Company Zip Code } |
| insuranceCompanyBillin<br>gPriorityCode CD<br>Private | The billing priority or order for the insurance company. | Default: NEMSIS Reference: { E07_04 Insurance Company Billing Priority }   |
| insuranceGroupIdentifier II<br>Private [01]           | The ID number or name of the patient's insurance group   | Default: NEMSIS Reference: { E07_09 Insurance Group ID/ Name }   |
| insurancePolicyIdentifier II Private [01]             | The ID number of the patient's insurance policy          | Default: NEMSIS Reference: { E07_10 Insurance Policy ID Number }   |
| insuredPersonName EN.PN Private  [01]                 | person's name  | Default: NEMSIS Reference: { E07_11 Last Name of the Insured } NEMSIS Reference: { E07_12 First Name of the Insured } NEMSIS Reference: { E07_13 Middle Initial/ Name of the Insured }   |

| Attribute               | Notes  | Constraints and tags          |
|-------------------------|--|-------------------------------|
| insuredRelationshipCode | The relationship of the patient to the primary | Default:                      |
| CD                      | insured person                                 | NEMSIS Reference: { E07_14    |
| Private                 |  | Relationship to the Insured } |
| [01]                    |  |                               |

# **PatientEmployment**

Type: <u>Class</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: E07\_Billing Keywords:

Detail: Created on 7/28/2009. Last modified on 7/28/2009. GUID: {C712E154-D3EF-4bfb-A1E3-F85C131C2C10}

### **Custom Properties**

• isActive = False

#### **Connections**

| Connector                         | Source                      | Target                            | Notes |
|-----------------------------------|-----------------------------|-----------------------------------|-------|
| Aggregation Source -> Destination | Public<br>PatientEmployment | Public<br>PatientEncounterBilling |       |

| Attribute               | Notes   | Constraints and tags              |
|-------------------------|---|-----------------------------------|
| patientOccupationalIndu | The occupational industry of the patient's work | Default:                          |
| stryCode CD             |   | NEMSIS Reference: { E07_16        |
| Private                 |   | Patient's Occupational Industry } |
|                         |   |                                   |
|                         |   |                                   |
| [01]                    |   |                                   |
|                         |   |                                   |
|                         |   |                                   |
| patientOccupationCode   | The occupation of the patient                   | Default:                          |
| CD                      |   | NEMSIS Reference: { E07_17        |
| Private                 |   | Patient's Occupation }            |
|                         |   |                                   |
|                         |   |                                   |
| [01]                    |   |                                   |
|                         |   |                                   |
|                         |   |                                   |

| Attribute   | Notes  | Constraints and tags   |
|---|--|--|
| patientEmployerName EN.ON Private  [01]                     | The name of the patient's employer           | Default: NEMSIS Reference: { E07_27 Patient's Employer }   |
| patientEmployerAddress AD Private  [01]                     | The street address of the patient's employer | Default: NEMSIS Reference: { E07_28 Patient's Employer's Address } NEMSIS Reference: { E07_29 Patient's Employer's City } NEMSIS Reference: { E07_30 Patient's Employer's State } NEMSIS Reference: { E07_31 Patient's Employer's Zip Code } |
| patientWorkTelephoneN<br>umber TEL.PHONE<br>Private<br>[01] | The patient's work telephone number          | Default: NEMSIS Reference: { E07_32 Patient's Work Telephone Number }  |

# **PatientEncounterBilling**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: E07\_Billing Keywords:

Detail: Created on 7/28/2009. Last modified on 7/28/2009. GUID: {578C56CC-354B-4063-B715-BD678BAC3866}

### **Custom Properties**

• isActive = False

| Connector             | Source                  | Target                  | Notes |
|-----------------------|-------------------------|-------------------------|-------|
| Association           | Public                  | Public                  |       |
| Unspecified           | PatientEncounterBilling | PatientCareReport       |       |
|                       |                         | _                       |       |
| <b>Aggregation</b>    | Public                  | Public                  |       |
| Source -> Destination | PatientEmployment       | PatientEncounterBilling |       |
|                       | _ ,                     |                         |       |

| Connector             | Source          | Target                  | Notes |
|-----------------------|-----------------|-------------------------|-------|
| Aggregation           | Public          | Public                  |       |
| Source -> Destination | PatientRelative | PatientEncounterBilling |       |
|                       |                 |                         |       |
| <b>Aggregation</b>    | Public          | Public                  |       |
| Source -> Destination | Insurer         | PatientEncounterBilling |       |
|                       |                 |                         |       |
| <b>Aggregation</b>    | Public          | Public                  |       |
| Source -> Destination | PatientService  | PatientEncounterBilling |       |
|                       |                 |                         |       |

| Attributes Attribute                              | Notes   | Constraints and tags   |
|---|---|--|
| primaryPaymentMethod<br>Code CD<br>Private        | The primary method of payment or type of insurance associated with this EMS encounter | Default: NEMSIS Reference: { E07_01 Primary Method of Payment }        |
| medicalNecessityCertifica teCode CD Private  [01] | Indication of whether a certificate of medical necessity is present                   | Default: NEMSIS Reference: { E07_02 Certificate of Medical Necessity } |
| workRelatedCode CD<br>Private [01]                | Indication of whether or not the injury is work related.                              | Default: NEMSIS Reference: { E07_15 Work-Related }                     |
| responseUrgencyCode CD Private  [01]              | The urgency in which the EMS agency began to mobilize resources.                      | Default: NEMSIS Reference: { E07_33 Response Urgency }                 |
| cMSServiceLevelCode<br>CD<br>Private              | The CMS service level for this EMS encounter.   | Default: NEMSIS Reference: { E07_34 CMS Service Level }                |

| Attribute             | Notes  | Constraints and tags       |
|-----------------------|--|----------------------------|
| conditionModifierCode | The CMS Condition Code Modifier is used to   | Default:                   |
| CD                    | better describe the EMS ground or air medical  | NEMSIS Reference: { E07_37 |
| Private               | services response and service delivery. Please consult CMS documentation for detailed descriptions of these modifiers and their use. | Condition Code Modifier }  |
| [01]                  |  |                            |

## **PatientRelative**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: E07\_Billing Keywords:

Detail: Created on 7/28/2009. Last modified on 7/28/2009. GUID: {69FEB160-1F93-423f-A76D-AB9B366A4F82}

## **Custom Properties**

• isActive = False

#### **Connections**

| Connector                         | Source                    | Target                         | Notes |
|-----------------------------------|---------------------------|--------------------------------|-------|
| Aggregation Source -> Destination | Public<br>PatientRelative | Public PatientEncounterBilling |       |
|                                   |                           | 1 44744244 9 4444 2 4444 9     |       |

| Attribute           | Notes | Constraints and tags               |
|---------------------|-------|------------------------------------|
| closestRelativeName |       | Default:                           |
| EN.PN               |       | NEMSIS Reference: { E07_18         |
| Private             |       | Closest Relative/ Guardian Last    |
|                     |       | Name }                             |
|                     |       | NEMSIS Reference: { E07_19 First   |
| [01]                |       | Name of the Closest Relative/      |
|                     |       | Guardian }                         |
|                     |       | NEMSIS Reference: { E07_20         |
|                     |       | Middle Initial/Name of the Closest |
|                     |       | Relative/ Guardian }               |
|                     |       |                                    |
|                     |       |                                    |

| Attribute   | Notes  | Constraints and tags  |
|---|--|---|
| closestRelativePostalAdd ress AD Private  [01]      |  | Default: NEMSIS Reference: { E07_21 Closest Relative/ Guardian Street Address } NEMSIS Reference: { E07_22 Closest Relative/ Guardian City } NEMSIS Reference: { E07_23 Closest Relative/ Guardian State } NEMSIS Reference: { E07_24 Closest Relative/ Guardian Zip Code } |
| closestRelativePhoneNum<br>ber TEL.PHONE<br>Private | The home or other phone number of the patient's closest relative or guardian | Default: NEMSIS Reference: { E07_25 Closest Relative/ Guardian Phone Number }   |
| closestRelativeRelationsh ipCode CD Private  [01]   | The relationship of the patient's closest relative or guardian               | Default: NEMSIS Reference: { E07_26 Closest Relative/ Guardian Relationship }   |

# **PatientService**

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: E07\_Billing Keywords:

Detail: Created on 7/28/2009. Last modified on 7/28/2009. GUID: {A84F29DC-6DD4-48ca-BB6D-589A2612E6A3}

# **Custom Properties**

• isActive = False

| Connector             | Source         | Target                  | Notes |
|-----------------------|----------------|-------------------------|-------|
| Aggregation           | Public         | Public                  |       |
| Source -> Destination | PatientService | PatientEncounterBilling |       |

#### Attributes

| Attribute            | Notes   | Constraints and tags            |
|----------------------|---|---------------------------------|
| iCD9ConditionCode CD | The ICD-9 Code assigned by CMS for the          | Default:                        |
| Private              | condition code documented in E7.35. Please      | NEMSIS Reference: { E07_36 ICD- |
|                      | consult CMS documentation for detailed          | 9 Code for the Condition Code   |
|                      | descriptions of the Condition Codes and their   | Number }                        |
| [01]                 | use.  |                                 |
|                      |   |                                 |
|                      |   |                                 |
|                      |   |                                 |
| conditionCode CD     | The condition codes are used to better describe | Default:                        |
| Private              | the service and patient care delivery by an EMS | NEMSIS Reference: { E07_35      |
|                      | service. Please consult CMS documentation for   | Condition Code Number }         |
|                      | detailed descriptions of these condition codes  |                                 |
|                      | and their use.                                  |                                 |
|                      |   |                                 |
|                      |   |                                 |
|                      |   |                                 |

# E08\_Scene

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS SIM

Detail: Created on 7/28/2009. Last modified on 7/28/2009 GUID: {3DD9B407-6594-4f2f-8E34-CE9FF70333BC}

**E08 Scene** - (Logical diagram)

Created By: AbdulMalik Shakir on 7/28/2009

*Last Modified:* 7/28/2009

Version: 1.0. Locked: False

*GUID*: {97AE1F75-11E6-409f-969F-646ED5928F6B}

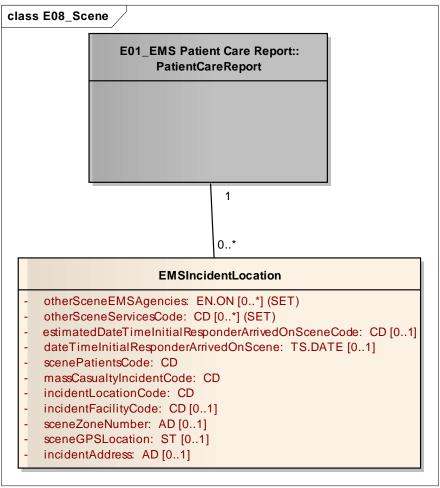


Figure: 35

#### **EMSIncidentLocation**

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: E08\_Scene Keywords:

 Detail:
 Created on 7/28/2009. Last modified on 7/28/2009.

 GUID:
 {CC136AB5-7725-4cfd-867E-F2BA7501C6EA}

### **Custom Properties**

• isActive = False

| Connector          | Source              | Target            | Notes |
|--------------------|---------------------|-------------------|-------|
| <b>Association</b> | Public              | Public            |       |
| Unspecified        | EMSIncidentLocation | PatientCareReport |       |

| Connector | Source | Target | Notes |
|-----------|--------|--------|-------|
|           |        |        |       |

| <u>Attributes</u>   |   |  |
|---|---|--|
| Attribute   | Notes   | Constraints and tags   |
| otherSceneEMSAgencies EN.ON Private Collection                                    | Other EMS agencies that were at the scene, if any   | Default: NEMSIS Reference: { E08_01 Other EMS Agencies at Scene }                            |
| [0*]  |   |  |
| CD<br>Private<br>Collection<br>[0*]   | Other services that were at the scene, if any   | Default: NEMSIS Reference: { E08_02 Other Services at Scene }                                |
| estimatedDateTimeInitial<br>ResponderArrivedOnSce<br>neCode CD<br>Private<br>[01] | The date/time differential between the initial responder and the EMS unit arriving on the scene, if applicable. | Default: NEMSIS Reference: { E08_03 Estimated Date/Time Initial Responder Arrived on Scene } |
| dateTimeInitialResponde rArrivedOnScene TS.DATE Private  [01]                     | The time that the initial responder arrived on the scene, if applicable.  | Default: NEMSIS Reference: { E08_04 Date/ Time Initial Responder Arrived on Scene }          |
| scenePatientsCode CD<br>Private   | Indicator of how many total patients were at the scene  | Default: NEMSIS Reference: { E08_05 Number of Patients at Scene }                            |

| Attribute                                  | Notes   | Constraints and tags   |
|--|---|--|
| massCasualtyIncidentCo<br>de CD<br>Private | Indicator if this event would be considered a mass casualty incident (overwhelmed existing EMS resources)                           | Default: NEMSIS Reference: { E08_06 Mass Casualty Incident }   |
| incidentLocationCode CD<br>Private         | The kind of location where the incident happened  | Default: NEMSIS Reference: { E08_07 Incident Location Type }   |
| incidentFacilityCode CD                    | The state or regulatory number (code)   | Default:   |
| Private [01]                               | associated with the facility if the Incident is a Healthcare Facility.  | NEMSIS Reference: { E08_08<br>Incident Facility Code }   |
|  |   |  |
| sceneZoneNumber AD<br>Private              | Geographic zone representing the location of the scene  | Default: NEMSIS Reference: { E08_09 Scene Zone Number }  |
| [01]                                       |   |  |
| sceneGPSLocation ST<br>Private             | The GPS coordinates associated with the Scene.  | Default: NEMSIS Reference: { E08_10 Scene GPS Location }   |
| [01]                                       |   |  |
| incidentAddress AD<br>Private              | The street address (or best approximation) where the patient was found, or, if no patient, the address to which the unit responded. | Default: NEMSIS Reference: { E08_11 Incident Address }   |
| [01]                                       |   | NEMSIS Reference: { E08_12 Incident City } NEMSIS Reference: { E08_13 Incident County } NEMSIS Reference: { E08_14 Incident State } NEMSIS Reference: { E08_15 Incident Zip Code } |
|  |   |  |

# E09\_Situation

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS SIM

Detail: Created on 7/28/2009. Last modified on 7/28/2009
GUID: {608FD56C-450F-4500-8F9D-FD818E37758F}

**E09\_Situation** - (Logical diagram)

Created By: AbdulMalik Shakir on 7/28/2009

*Last Modified:* 7/28/2009

Version: 1.0. Locked: False

*GUID*: {17475607-F7D0-4f8d-A328-068678141315}

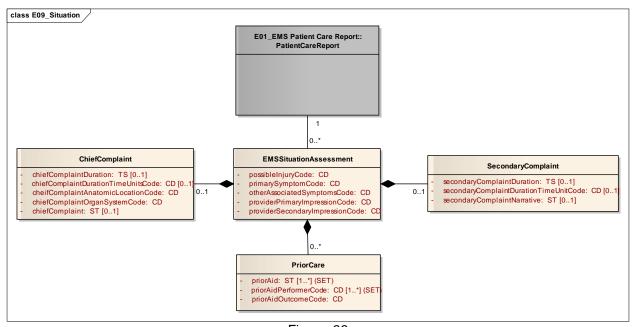


Figure: 36

# **ChiefComplaint**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0. Package: E09 Situation Keywords:

Detail: Created on 7/28/2009. Last modified on 7/28/2009. GUID: {EE6E88EE-2C36-4722-A614-FF808AB7FA87}

#### **Custom Properties**

• isActive = False

**Connections** 

| Connector             | Source         | Target               | Notes |
|-----------------------|----------------|----------------------|-------|
| Aggregation           | Public         | Public               |       |
| Source -> Destination | ChiefComplaint | EMSSituationAssessme |       |
|                       |                | nt                   |       |
|                       |                |                      |       |

| Attributes  | NT - 4   | Company to the condition  |
|---|--|---|
| Attribute   | Notes  | Constraints and tags  |
| chiefComplaintDuration<br>TS<br>Private               | The time duration of the chief complaint   | Default: NEMSIS Reference: { E09_06 Duration of Chief Complaint }               |
| [01]  |  |   |
| chiefComplaintDuration<br>TimeUnitsCode CD<br>Private | The time units of the duration of the patient's chief complaint  | Default: NEMSIS Reference: { E09_07 Time Units of Duration of Chief Complaint } |
| [01]  |  |   |
| cheifComplaintAnatomic<br>LocationCode CD<br>Private  | The primary anatomic location of the chief complaint as identified by EMS personnel  | Default:  |
| chiefComplaintOrganSys<br>temCode CD<br>Private       | The primary organ system of the patient injured or medically affected. This is to be completed by EMS personnel with a minimum of an EMT-Paramedic level of credentialing. | Default: NEMSIS Reference: { E09_12 Chief Complaint Organ System }              |
| chiefComplaint ST<br>Private [01]                     | The statement of the problem by the patient or the history provider in one or two words  | Default: NEMSIS Reference: { E09_05 Chief Complaint }                           |
|   |  |   |

## **EMSSituationAssessment**

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0. Package: E09\_Situation Keywords:

Detail: Created on 7/28/2009. Last modified on 7/28/2009. GUID: {E4ED5817-0E0E-48b2-AB39-58F3A3FCF312}

# **Custom Properties**

• isActive = False

#### **Connections**

| Connector             | Source               | Target               | Notes |
|-----------------------|----------------------|----------------------|-------|
| <b>Aggregation</b>    | Public               | Public               |       |
| Source -> Destination | PriorCare            | EMSSituationAssessme |       |
|                       |                      | nt                   |       |
| Association           | Public               | Public               |       |
| Unspecified           | EMSSituationAssessme | PatientCareReport    |       |
|                       | nt                   |                      |       |
|                       |                      |                      |       |
| <b>Aggregation</b>    | Public               | Public               |       |
| Source -> Destination | SecondaryComplaint   | EMSSituationAssessme |       |
|                       |                      | nt                   |       |
| Aggregation           | Public               | Public               |       |
| Source -> Destination | ChiefComplaint       | EMSSituationAssessme |       |
|                       | <u>*</u>             | nt                   |       |
|                       |                      |                      |       |

| Attribute             | Notes   | Constraints and tags       |
|-----------------------|---|----------------------------|
| possibleInjuryCode CD | Indicates that the reason for the EMS encounter   | Default:                   |
| Private               | was related to an injury or traumatic event. This | NEMSIS Reference: { E09_04 |
|                       | data element provides documentation to            | Possible Injury }          |
|                       | classify the EMS Reason for Encounter as          |                            |
|                       | either injury or non-injury related based on      |                            |
|                       | mechanism and not on actual injury                |                            |
|                       |   |                            |
|                       |   |                            |

| Attribute   | Notes   | Constraints and tags  |
|---|---|---|
| primarySymptomCode<br>CD<br>Private               | The primary sign and symptom present in the patient or observed by EMS personnel  | Default: NEMSIS Reference: { E09_13 Primary Symptom }                 |
| otherAssociatedSymptom<br>sCode CD<br>Private     | Other symptoms identified by the patient or observed by EMS personnel   | Default: NEMSIS Reference: { E09_14 Other Associated Symptoms }       |
| providerPrimaryImpressi<br>onCode CD<br>Private   | patient's primary problem or most significant condition which led to the management given to the patient (treatments, medications, or procedures).              | NEMSIS Reference: { E09_15 Providers Primary Impression }             |
| providerSecondaryImpre<br>ssionCode CD<br>Private | The EMS personnel's impression of the patient's secondary problem or which led to the management given to the patient (treatments, medications, or procedures). | Default: NEMSIS Reference: { E09_16 Provider's Secondary Impression } |

# **PriorCare**

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0. Package: E09\_Situation Keywords:

Detail: Created on 7/28/2009. Last modified on 7/28/2009. GUID: {7D387CE7-F7FD-4344-8BAA-7A8B67679012}

# **Custom Properties**

• isActive = False

| Connector Source | Target | Notes |
|------------------|--------|-------|
|------------------|--------|-------|

| Connector             | Source    | Target               | Notes |
|-----------------------|-----------|----------------------|-------|
| Aggregation           | Public    | Public               |       |
| Source -> Destination | PriorCare | EMSSituationAssessme |       |
|                       |           | nt                   |       |
|                       |           |                      |       |

# **Attributes**

| Attribute   | Notes  | Constraints and tags   |
|---|--|--|
| priorAid ST Private  Collection [1*]              | Any care which was provided to the patient prior to the arrival of this unit.          | Default: NEMSIS Reference: { E09 Prior Aid }                   |
| priorAidPerformerCode CD Private  Collection [1*] | The type of individual who performed the care prior to the arrival of this unit.       | Default: NEMSIS Reference: { E09_02 Prior Aid Performed By }   |
| priorAidOutcomeCode<br>CD<br>Private              | What was the outcome or result of the care performed prior to the arrival of the unit? | Default: NEMSIS Reference: { E09_03 Outcome of the Prior Aid } |

# SecondaryComplaint

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0. Package: E09\_Situation Keywords:

Detail: Created on 7/28/2009. Last modified on 7/28/2009. GUID: {1A4BF4E3-6189-4672-9790-F3B1C0F4A998}

## **Custom Properties**

• isActive = False

| Connector | Source | Target | Notes |
|-----------|--------|--------|-------|
|           |        | 0      |       |

| Connector             | Source             | Target               | Notes |
|-----------------------|--------------------|----------------------|-------|
| Aggregation           | Public             | Public               |       |
| Source -> Destination | SecondaryComplaint | EMSSituationAssessme |       |
|                       |                    | nt                   |       |
|                       |                    |                      |       |

## Attributes

| Attribute  | Notes   | Constraints and tags  |
|--|---|---|
| secondaryComplaintDur<br>ation TS<br>Private<br>[01]           | The duration of the secondary complaint                             | Default: NEMSIS Reference: { E09_09 Duration of Secondary Complaint }               |
| secondaryComplaintDur<br>ationTimeUnitCode CD<br>Private  [01] | The time units of the duration of the patient's secondary complaint | Default: NEMSIS Reference: { E09_10 Time Units of Duration of Secondary Complaint } |
| secondaryComplaintNarr<br>ative ST<br>Private                  | The narrative of the patient's secondary complaint                  | Default: NEMSIS Reference: { E09_08 Secondary Complaint Narrative }                 |

# E10\_SituationTrauma

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS SIM

Detail: Created on 7/28/2009. Last modified on 7/28/2009 GUID: {B080B367-60EC-4815-861C-B7FE9B92C9CB}

 $\underline{\textbf{E10 SituationTrauma}} \text{ - } (Logical \ diagram)$ 

Created By: AbdulMalik Shakir on 7/28/2009

*Last Modified:* 7/28/2009

Version: 1.0. Locked: False

*GUID*: {70912A89-5CDA-40b3-BCD0-55773AC35C79}

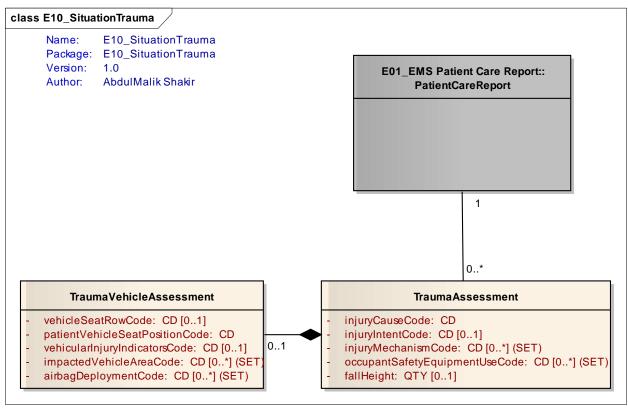


Figure: 37

### **TraumaAssessment**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0. Package: E10\_SituationTrauma Keywords:

Detail: Created on 7/28/2009. Last modified on 7/28/2009. GUID: {F96EB17-A218-41c3-B122-8011BDA4E864}

### **Custom Properties**

• isActive = False

| Connector             | Source                   | Target            | Notes |
|-----------------------|--------------------------|-------------------|-------|
| Aggregation           | Public                   | Public            |       |
| Source -> Destination | TraumaVehicleAssessm ent | TraumaAssessment  |       |
|                       |                          |                   |       |
| <b>Association</b>    | Public                   | Public            |       |
| Unspecified           | TraumaAssessment         | PatientCareReport |       |
|                       |                          |                   |       |

#### Attributes

| Attributes Attribute   | Notes   | Constraints and tags   |
|--|---|--|
| injuryCauseCode CD<br>Private  | The category of the reported/suspected external cause of the injury                                 | Default: NEMSIS Reference: { E10_01 Cause of Injury }                  |
| injuryIntentCode CD Private  [01]                                      | The intent of the individual inflicting the injury  | Default: NEMSIS Reference: { E10_02 Intent of the Injury }             |
| injuryMechanismCode<br>CD<br>Private<br>Collection<br>[0*]             | The mechanism of the event which caused the injury.   | Default: NEMSIS Reference: { E10_03 Mechanism of Injury }              |
| occupantSafetyEquipmen<br>tUseCode CD<br>Private<br>Collection<br>[0*] | Safety equipment in use by the patient at the time of the injury                                    | Default: NEMSIS Reference: { E10_08 Use of Occupant Safety Equipment } |
| fallHeight QTY Private  [01]   | The distance in feet the patient fell, measured from the lowest point of the patient to the ground. | Default: NEMSIS Reference: { E10_10 Height of Fall }                   |

## **TraumaVehicleAssessment**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0. Package: E10\_SituationTrauma Keywords:

Detail: Created on 7/28/2009. Last modified on 7/28/2009. GUID: {2B194C4A-50E1-4e08-A429-E8357ADC2620}

# **Custom Properties**

• isActive = False

# **Connections**

| Connector             | Source               | Target           | Notes |
|-----------------------|----------------------|------------------|-------|
| Aggregation           | Public               | Public           |       |
| Source -> Destination | TraumaVehicleAssessm | TraumaAssessment |       |
|                       | ent                  |                  |       |
|                       |                      |                  |       |

| <u>Attributes</u>         | NT 4  |  |
|---------------------------|---|--|
| Attribute                 | Notes   | Constraints and tags   |
| vehicleSeatRowCode CD     | The seat row location of the patient in vehicle             | Default:   |
| Private                   | at the time of the crash with the front seat numbered as 1. | NEMSIS Reference: { E10_06 Seat Row Location of Patient in Vehicle |
|                           |   | }  |
| [01]                      |   |  |
|                           |   |  |
|                           |   |  |
| patientVehicleSeatPositio | The position of the patient in seat of the vehicle          | Default:   |
| nCode CD                  | at the time of the crash                                    |  |
| Private                   |   |  |
|                           |   |  |
|                           |   |  |
|                           |   |  |
| vehicularInjuryIndicator  | The kind of risk factor predictors associated               | Default:   |
| sCode CD                  | with the vehicle involved in the incident                   | NEMSIS Reference: { E10_04   |
| Private                   |   | Vehicular Injury Indicators }                                      |
|                           |   |  |
| [01]                      |   |  |
| [01]                      |   |  |
|                           |   |  |
|                           | The area or location of impact on the vehicle               | Default:   |
| e CD                      |   | NEMSIS Reference: { E10_05 Area                                    |
| Private                   |   | of the Vehicle Impacted by the Collision }                         |
| Collection                |   |  |
| [0*]                      |   |  |
|                           |   |  |
|                           |   |  |

| Attribute            | Notes                                      | Constraints and tags       |
|----------------------|--|----------------------------|
| airbagDeploymentCode | Indication of Airbag deployment during the | Default:                   |
| CD                   | motor vehicle crash.                       | NEMSIS Reference: { E10_09 |
| Private              |  | Airbag Deployment }        |
|                      |  |                            |
| Collection           |  |                            |
| [0*]                 |  |                            |
|                      |  |                            |
|                      |  |                            |

# E11\_CPRSituation

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS SIM

Detail: Created on 7/28/2009. Last modified on 7/28/2009 GUID: {AB8DBA91-1FFB-42bc-843F-8B972BEB1F81}

 $\underline{E11\_CPRSituation} - (Logical\ diagram)$ 

Created By: AbdulMalik Shakir on 7/28/2009

*Last Modified:* 7/28/2009

Version: 1.0. Locked: False

*GUID*: {B6FCC614-35D6-4a21-A63E-5119B250BE6B}

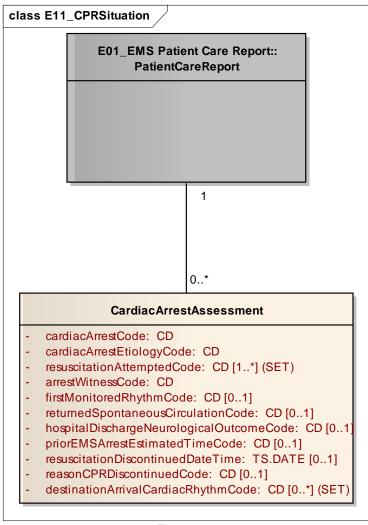


Figure: 38

### **CardiacArrestAssessment**

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0. Package: E11\_CPRSituation Keywords:

Detail: Created on 7/28/2009. Last modified on 7/28/2009. GUID: {42007B0B-D56B-4ff7-9179-4CD32F540074}

## **Custom Properties**

• isActive = False

|  | Connector | Source | Target | Notes |
|--|-----------|--------|--------|-------|
|--|-----------|--------|--------|-------|

| Connector          | Source                | Target            | Notes |
|--------------------|-----------------------|-------------------|-------|
| <b>Association</b> | Public                | Public            |       |
| Unspecified        | CardiacArrestAssessme | PatientCareReport |       |
|                    | nt                    |                   |       |
|                    |                       |                   |       |

| <u>Attributes</u>                           | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\   |  |
|---|--|--|
| Attribute                                   | Notes  | Constraints and tags   |
| cardiacArrestCode CD<br>Private             | Indication of the presence of a cardiac arrest at any time associated with the EMS evert.            | Default: NEMSIS Reference: { E11_01 Cardiac Arrest }               |
| anding A westEtislagy Co                    | Indication of the atiology or cause of the   | Defaulte   |
| cardiacArrestEtiologyCo<br>de CD<br>Private | Indication of the etiology or cause of the cardiac arrest (classified as cardiac, non-cardiac, etc.) | Default: NEMSIS Reference: { E11_02 Cardiac Arrest Etiology }      |
| resuscitationAttemptedC                     | Indication of an attempt to resuscitate the  | Default:   |
| ode CD<br>Private                           | patient who is in cardiac arrest (attempted, not attempted due to DNR, etc.)                         | NEMSIS Reference: { E11_03<br>Resuscitation Attempted }            |
| Collection [1*]                             |  |  |
| arrestWitnessCode CD                        | Indication of who the cardiac arrest was   | Default:   |
| Private                                     | witnessed by   | NEMSIS Reference: { E11_04<br>Arrest Witnessed by }                |
| firstMonitoredRhythmCo                      | Documentation of what the first monitored  | Default:   |
| de CD<br>Private                            | rhythm which was noted   | NEMSIS Reference: { E11_05 First Monitored Rhythm of the Patient } |
| [01]  |  |  |
|   |  |  |

| Attribute  | Notes  | Constraints and tags  |
|--|--|---|
| returnedSpontaneousCir<br>culationCode CD<br>Private               | Indication whether or not there was any return of spontaneous circulation at any time during the EMS evert.  | Default: NEMSIS Reference: { E11_06 Any Return of Spontaneous Circulation }         |
| [01]   |  |   |
| hospitalDischargeNeurol<br>ogicalOutcomeCode CD<br>Private<br>[01] | The level of cerebral performance of the patient at the time of discharge from the Hospital: ? 1 = Good Cerebral Performance: Conscious, Alert, able to work and lead a normal life ? 2 = Moderate Cerebral Disability: Conscious and able to function independently (dress, travel, prepare food) may have hemiplegia, seizures, or permanent memory or mental changes ? 3 = Severe Cerebral Disability: Conscious, dependent on others for daily support, functions only in an institution or at home with | Default: NEMSIS Reference: { E11_07 Neurological Outcome at Hospital Discharge }    |
|  | exceptional family effort ? 4 - Coma, vegetative state   |   |
| priorEMSArrestEstimate<br>dTimeCode CD<br>Private<br>[01]          | The length of time the patient was down (estimated) before the responding unit arrived at the patient  | Default: NEMSIS Reference: { E11_08 Estimated Time of Arrest Prior to EMS Arrival } |
| resuscitationDiscontinued DateTime TS.DATE Private  [01]           | The date/time the CPR was discontinued (or could be time of death)   | Default: NEMSIS Reference: { E11_09 Date/Time Resuscitation Discontinued }          |
| reasonCPRDiscontinued<br>Code CD<br>Private                        | The reason that CPR or the resuscitation efforts were discontinued.  | Default: NEMSIS Reference: { E11_10 Reason CPR Discontinued }                       |
| [01]   |  |   |

| Attribute                                  | Notes   | Constraints and tags                       |
|--|---|--|
| destinationArrivalCardia<br>cRhythmCode CD | The patient's cardiac rhythm upon delivery or transfer to the destination | Default:<br>NEMSIS Reference: { E11_11     |
| Private                                    | dunister to the destination   | Cardiac Rhythm on Arrival at Destination } |
| Collection [0*]                            |   | Destination )                              |

# E12\_MedicalHistory

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS SIM

Detail: Created on 8/12/2009. Last modified on 8/25/2009 GUID: {22F6E2F4-A7B7-4125-9624-042F948154B9}

E12 MedicalHistory - (Logical diagram)
Created By: Salimah Shakir on 8/12/2009

*Last Modified:* 8/25/2009

Version: 1.0. Locked: False

*GUID*: {8242B66E-BE78-4f72-A49D-D7EDB4DC24DC}

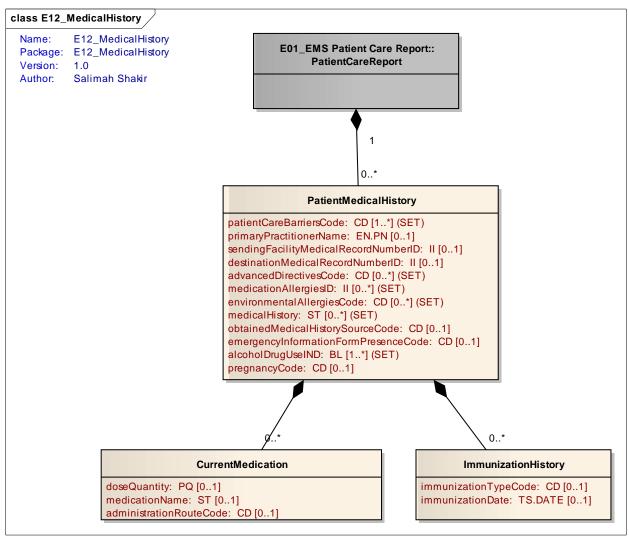


Figure: 39

#### CurrentMedication

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0. Package: E12\_MedicalHistory Keywords:

Detail: Created on 7/30/2009. Last modified on 8/25/2009. GUID: {1F056551-B70A-4ef3-AB35-3B0E2273EBB6}

#### **Custom Properties**

• isActive = False

| Connector             | Source                | Target                | Notes |
|-----------------------|-----------------------|-----------------------|-------|
| <b>Aggregation</b>    | Public                | Public                |       |
| Source -> Destination | CurrentMedication     | PatientMedicalHistory |       |
|                       |                       | -                     |       |
| Aggregation           | Public                | Public                |       |
| Source -> Destination | CurrentMedicationDose | CurrentMedication     |       |
|                       |                       |                       |       |

#### Attributes

| Attribute                                 | Notes  | Constraints and tags  |
|---|--|---|
| doseQuantity PQ<br>Private<br>[01]        | The numeric dose or amount of the patient's current medication             | Default: NEMSIS Reference: { E12_15 Current Medication Dose }                 |
| medicationName ST<br>Private              | The medications the patient currently takes                                | Default: NEMSIS Reference: { E12_14   |
| [01]                                      |  | Current Medications }   |
| administrationRouteCod<br>e CD<br>Private | The administration route (po, SQ, etc.) of the patients current medication | Default: NEMSIS Reference: { E12_17 Current Medication Administration Route } |
| [01]                                      |  |   |

# CurrentMedicationDose

Type: Class

Status: Proposed. Version 1.0. Phase 1.0. Package:

E12\_MedicalHistory Keywords: Created on 7/30/2009. Last modified on 8/25/2009. Detail: GUID: {BA736C31-F728-43c3-8BF0-14F7E9D5B27C}

## **Custom Properties**

• isActive = False

# **Connections**

| Connector             | Source                | Target            | Notes |
|-----------------------|-----------------------|-------------------|-------|
| Aggregation           | Public                | Public            |       |
| Source -> Destination | CurrentMedicationDose | CurrentMedication |       |
|                       |                       |                   |       |

## **Attributes**

| Attribute            | Notes                                       | Constraints and tags             |
|----------------------|---|----------------------------------|
| doseQuantity PQ      | The numeric dose or amount of the patient's | Default:                         |
| Private              | current medication                          | NEMSIS Reference: { E12_15       |
|                      |   | Current Medication Dose }        |
| [0, 1]               |   |                                  |
| [01]                 |   |                                  |
|                      |   |                                  |
|                      |   |                                  |
| doseQuantityUnitCode | The dosage unit of the patient's current    | Default:                         |
| CD                   | medication                                  | NEMSIS Reference: { E12_16       |
| Private              |   | Current Medication Dosage Unit } |
|                      |   |                                  |
| [O 1]                |   |                                  |
| [01]                 |   |                                  |
|                      |   |                                  |
|                      |   |                                  |

# **ImmunizationHistory**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0. Package: E12\_MedicalHistory Keywords:

Detail: Created on 7/30/2009. Last modified on 8/25/2009. GUID: {2BAA67F4-263A-4c0e-8E5F-789531A92C2F}

## **Custom Properties**

• isActive = False

# **Connections**

| Connector             | Source              | Target                | Notes |
|-----------------------|---------------------|-----------------------|-------|
| <b>Aggregation</b>    | Public              | Public                |       |
| Source -> Destination | ImmunizationHistory | PatientMedicalHistory |       |
|                       |                     |                       |       |

| Attribute | Notes | Constraints and tags |
|-----------|-------|----------------------|
|-----------|-------|----------------------|

| Attribute            | Notes   | Constraints and tags       |
|----------------------|---|----------------------------|
| immunizationTypeCode | The type of immunization the patient has      | Default:                   |
| CD                   | received.                                     | NEMSIS Reference: { E12_12 |
| Private              |   | Immunization History }     |
| [01]                 |   |                            |
| immunizationDate     | The date of the associated immunization type. | Default:                   |
| TS.DATE              |   | NEMSIS Reference: { E12_13 |
| Private              |   | Immunization Date }        |
| [01]                 |   |                            |

# **PatientMedicalHistory**

Type:

Status: Proposed. Version 1.0. Phase 1.0. Package:

E12\_MedicalHistory Keywords: Created on 7/30/2009. Last modified on 8/25/2009. Detail: {853ECF92-376C-40c3-9C90-913B66FC3F22} GUID:

## **Custom Properties**

• isActive = False

| Connections           |                       |                       |                                  |
|-----------------------|-----------------------|-----------------------|----------------------------------|
| Connector             | Source                | Target                | Notes                            |
| Aggregation           | Public                | Public                |                                  |
| Source -> Destination | ImmunizationHistory   | PatientMedicalHistory |                                  |
| Aggregation           | Public                | Public                |                                  |
| Source -> Destination | CurrentMedication     | PatientMedicalHistory |                                  |
| Aggregation           | Public                | Public                |                                  |
| Source -> Destination | PrimaryPractitioner   | PatientMedicalHistory |                                  |
| Association isPartOf  | Public                | Public                | Each MedicalHistory always is    |
| Unspecified           | PatientMedicalHistory | PatientCareReport     | part of one PatientCareReport.   |
|                       |                       |                       | Each PatientCareReport sometimes |
|                       |                       |                       | includes one or more             |
|                       |                       |                       | MedicalHistory.                  |
|                       |                       |                       |                                  |

| Attribute  | Notes  | Constraints and tags  |
|--|--|---|
| patientCareBarriersCode CD Private Collection                  | Indication of whether or not there were any patient specific barriers to serving the patient at the scene      | Default: NEMSIS Reference: { E12_01 Barriers To Patient Care }                  |
| [1*]   |  |   |
| primaryPractitionerNam e EN.PN Private  [01]                   | The first name of the patient's primary practitioner   | Default: NEMSIS Reference: { E12_04 First Name Patient's Primary Practitioner } |
| sendingFacilityMedicalR<br>ecordNumberID II<br>Private<br>[01] | The medical record number of the medical facility who is transferring care to EMS                              | Default: NEMSIS Reference: { E12_02 SendingFacilityMedicalRecordNum ber }       |
| destinationMedicalRecor<br>dNumberID II<br>Private<br>[01]     | The patient's medical record number at the patient's receiving facility  | Default: NEMSIS Reference: { E12_03 Destination Medical Record Number }         |
| advancedDirectivesCode CD Private  Collection [0*]             | The presence of a valid for of living will of document directing end of life or healthcare treatment decisions | Default: NEMSIS Reference: { E12_07 Advanced Directives }                       |
| medicationAllergiesID II Private  Collection [0*]              | The patient's medication allergies   | Default: NEMSIS Reference: { E12_08 Medication Allergies }                      |

| Attribute  | Notes   | Constraints and tags   |
|--|---|--|
| environmentalAllergiesC ode CD Private  Collection [0*]    | The patient's known allergies to food or environmental agents.  | Default: NEMSIS Reference: { E12_09 Environmental/Food Allergies }           |
| medicalHistory ST Private  Collection [0*]                 | The patient's pre-existing medical and surgery history of the patient   | Default: NEMSIS Reference: { E12_10 Medical/Surgical History }               |
| obtainedMedicalHistoryS<br>ourceCode CD<br>Private<br>[01] | Type of person medical history obtained from  | Default: NEMSIS Reference: { E12_11 Medical History Obtained From }          |
| emergencyInformationFormPresenceCode CD Private  [01]      | Indication of the presence of the Emergency Information Form associated with patient's with special healthcare needs. | Default: NEMSIS Reference: { E12_18 Presence Of Emergency Information Form } |
| alcoholDrugUseIND BL Private  Collection [1*]              | Indicators for the potential use of Alcohol or Drugs by the patient.  | Default: NEMSIS Reference: { E12_19 Alcohol/Drug Use Indicators }            |
| pregnancyCode CD Private  [01]                             | Indication of the possibility by the patient's history of current pregnancy   | Default: NEMSIS Reference: { E12_20 Pregnancy }                              |

# **PrimaryPractitioner**

Type: Class

Proposed. Version 1.0. Phase 1.0. Status: E12\_MedicalHistory Keywords: Created on 7/30/2009. Last modified on 8/25/2009. Package:

Detail: {79AAB505-7E78-4189-86A3-B7484208BC49} GUID:

# **Custom Properties**

• isActive = False

## **Connections**

| Connector             | Source              | Target                | Notes |
|-----------------------|---------------------|-----------------------|-------|
| Aggregation           | Public              | Public                |       |
| Source -> Destination | PrimaryPractitioner | PatientMedicalHistory |       |
|                       |                     |                       |       |

<u>Attributes</u>

| Attribute   | Notes   | Constraints and tags  |
|---|---|---|
| patient'sPrimaryPractitio<br>nerFirstName EN.PN<br>Private<br>[01]  | The first name of the patient's primary practitioner  | Default: NEMSIS Reference: { E12_04 First Name Patient's Primary Practitioner }     |
| patient'sPrimaryPractitio<br>nerMiddleName EN.PN<br>Private<br>[01] | The middle name of the patient's primary practitioner | Default: NEMSIS Reference: { E12_05 Middle Name Of Patient's Primary Practitioner } |
| patient'sPrimaryPractitio<br>nerLastName EN.PN<br>Private  [01]     | The last name of the patient's primary practitioner   | Default: NEMSIS Reference: { E12_06 Last Name Of Patient's Primary Practitioner }   |

# E14\_VitalAssessment

**Package** Type:

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS SIM

Detail: Created on 8/12/2009. Last modified on 8/26/2009 GUID: {A0B32044-13BD-49fe-8763-BC97210C9200}

E14 VitalAssessment - (Logical diagram)
Created By: Salimah Shakir on 8/12/2009

*Last Modified:* 8/25/2009

Version: 1.0. Locked: False

GUID: {AEC0E1FD-09CE-4d53-8307-8FC1F4F782EF}

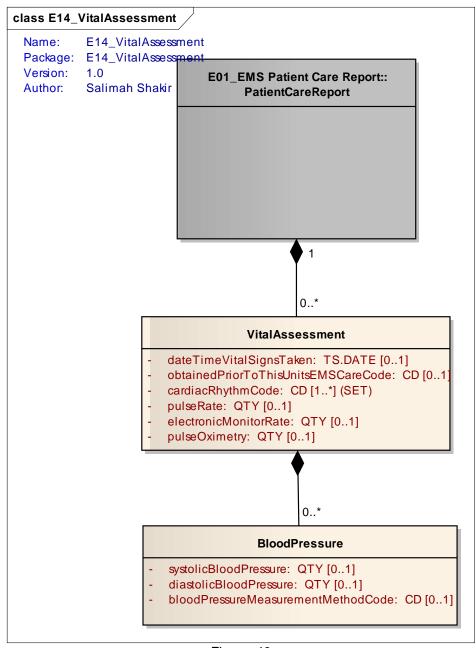


Figure: 40

## **BloodPressure**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0. Package: E14\_VitalAssessment Keywords:

*Detail:* Created on 8/2/2009. Last modified on 8/25/2009. GUID: {9E26DD84-9F83-4f95-A14C-1CB4B75E2025}

# **Custom Properties**

• isActive = False

**Connections** 

| Connector                         | Source                  | Target                    | Notes |
|-----------------------------------|-------------------------|---------------------------|-------|
| Aggregation Source -> Destination | Public<br>BloodPressure | Public<br>VitalAssessment |       |
|                                   |                         |                           |       |

| Attribute  | Notes   | Constraints and tags   |
|--|---|--|
| systolicBloodPressure<br>QTY<br>Private<br>[01]              | The patient's systolic blood pressure             | Default: NEMSIS Reference: { E14_04 SBP (Systolic Blood Pressure) }        |
| diastolicBloodPressure<br>QTY<br>Private<br>[01]             | The patient's diastolic blood pressure            | Default: NEMSIS Reference: { E14_05 DBP (Diastolic Blood Pressure) }       |
| bloodPressureMeasurem<br>entMethodCode CD<br>Private<br>[01] | Indication of method of blood pressure procedure. | Default: NEMSIS Reference: { E14_06 Method Of Blood Pressure Measurement } |

# **VitalAssessment**

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0. Package: E14\_VitalAssessment Keywords:

Detail: Created on 8/2/2009. Last modified on 8/25/2009. GUID: {18394ADF-5A1E-4487-8565-5CD4906EFB4E}

## **Custom Properties**

• isActive = False

#### **Connections**

| Connector                   | Source          | Target            | Notes                            |
|-----------------------------|-----------------|-------------------|----------------------------------|
| Aggregation                 | Public          | Public            |                                  |
| Source -> Destination       | BloodPressure   | VitalAssessment   |                                  |
|                             |                 |                   |                                  |
| <b>Association</b> isPartOf | Public          | Public            | Each Assessment/VitalSigns       |
| Unspecified                 | VitalAssessment | PatientCareReport | always is part of one            |
|                             |                 |                   | PatientCareReport.               |
|                             |                 |                   | Each PatientCareReport sometimes |
|                             |                 |                   | includes one or more             |
|                             |                 |                   | Assessment/VitalSigns.           |
|                             |                 |                   |                                  |

| Attribute   | Notes   | Constraints and tags  |
|---|---|---|
| dateTimeVitalSignsTake<br>n TS.DATE<br>Private        | Date/Time Vital Signs Taken   | Default: NEMSIS Reference: { E14_01 Date/Time Vital Signs Taken }           |
| [01]  |   |   |
| obtainedPriorToThisUnit<br>sEMSCareCode CD<br>Private | Indicates that the information which is documented was obtained prior to the EMS unit's care creting this patient care report | Default: NEMSIS Reference: { E14_02 Obtained Prior To This Units EMS Care } |
| [01]  |   |   |

| Attribute   | Notes   | Constraints and tags  |
|---|---|---|
| cardiacRhythmCode CD<br>Private<br>Collection<br>[1*] | The initial cardiac rhythm of the patient as interpreted by EMS personnel                           | Default: NEMSIS Reference: { E14_ Cardiac Rhythm }            |
| pulseRate QTY Private  [01]                           | The patient's pulse rate, palpated or auscultated, expressed as a number per minute                 | Default: NEMSIS Reference: { E14_07 Pulse Rate }              |
| electronicMonitorRate<br>QTY<br>Private<br>[01]       | The patient's heart rate as recorded by an electronic monitoring device (ECG, pulse oximetry, etc.) | Default: NEMSIS Reference: { E14_08 Electronic Monitor Rate } |
| pulseOximetry QTY Private  [01]                       | The patient's oxygen saturation   | Default: NEMSIS Reference: { E14_09 Pulse Oximetry }          |

# E15\_InjuryAssessment

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS SIM

Detail: Created on 8/12/2009. Last modified on 8/26/2009 GUID: {E1CB571E-1A33-4542-AAD4-D38101755F7D}

E15\_InjuryAssessment - (Logical diagram)
Created By: Salimah Shakir on 8/12/2009

Last Modified: 8/26/2009 Version: 1.0. Locked: False

*GUID*: {76D5C07B-0D5B-4803-9E86-8FE976D35473}

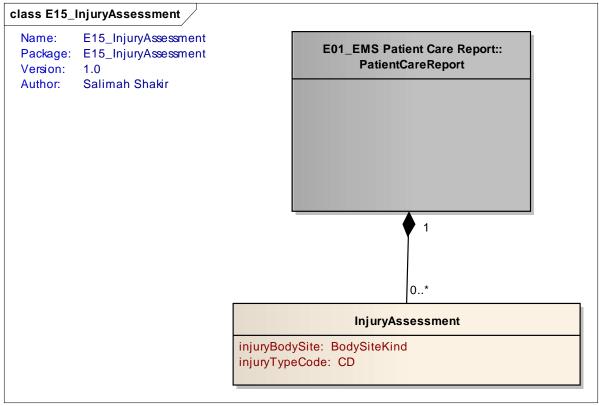


Figure: 41

# **InjuryAssessment**

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0. Package: E15\_InjuryAssessment Keywords:

*Detail: Created on 8/7/2009. Last modified on 8/26/2009. GUID:* {7741CCD4-7700-422e-9AE3-BC75EAF4EB22}

#### **Custom Properties**

• isActive = False

| Connector                   | Source           | Target            | Notes   |
|-----------------------------|------------------|-------------------|---|
| <b>Association</b> isPartOf | Public           | Public            | Each InjuryAssessment always is   |
| Unspecified                 | InjuryAssessment | PatientCareReport | part of one PatientCareReport<br>Each PatientCareReport sometimes<br>includes one or more<br>InjuryAssessment |
|                             |                  |                   |   |

### Attributes

| Attribute  | Notes | Constraints and tags   |
|--|-------|--|
| <b>injuryBodySite</b><br>BodySiteKind<br>Private |       | Default:   |
| <b>injuryTypeCode</b> CD<br>Private              |       | Default:  NEMSIS Reference: { E15_01 NHTSA Injury MAtrix   |
|  |       | External/Skin }  NEMSIS Reference: { E15_02 NHTSA Injury Matrix Head }  NEMSIS Reference: { E15_03 NHTSA Injury Matrix Face }  NEMSIS Reference: { E15_04 NHTSA Injury Matrix Neck }  NEMSIS Reference: { E15_05 NHTSA Injury Matrix Thorax }  NEMSIS Reference: { E15_05 NHTSA Injury Matrix Abdomen }  NEMSIS Reference: { E15_06 NHTSA Injury Matrix Abdomen }  NEMSIS Reference: { E15_07 NHTSA Injury Matrix Spine }  NEMSIS Reference: { E15_08 NHTSA Injury Matrix Upper Extremities }  NEMSIS Reference: { E15_09 NHTSA Injury Matrix Pelvis }  NEMSIS Reference: { E15_10 NHTSA Injury Matrix Lower Extremities }  NEMSIS Reference: { E15_11 NHTSA Injury Matrix Unspecified } |

# E16\_PatientAssessment

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS SIM

Detail: Created on 8/12/2009. Last modified on 8/26/2009 GUID: {1895FD23-568E-4dd0-B38D-B3745040728C}

E16\_PatientAssessment - (Logical diagram)
Created By: AbdulMalik Shakir on 8/12/2009

*Last Modified:* 8/26/2009

Version: 1.0. Locked: False

GUID: {20C690A2-561B-4e2e-8CEE-80EBFD9DD190}

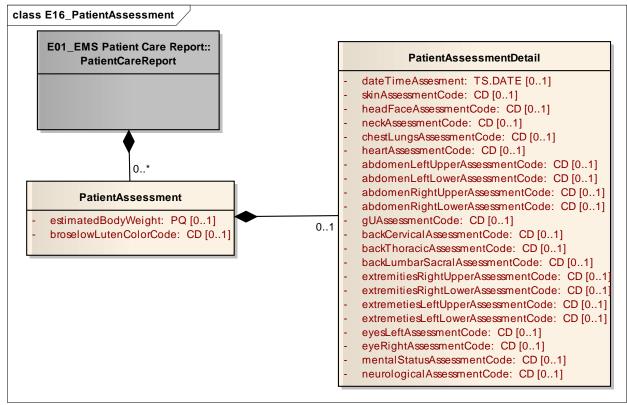


Figure: 42

#### **PatientAssessment**

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0. Package: E16\_PatientAssessment Keywords:

Detail: Created on 8/12/2009. Last modified on 8/26/2009. GUID: {6484AF0A-8CDC-47e9-AEA1-2F64E217BF4C}

### **Custom Properties**

• isActive = False

| Connector             | Source                   | Target            | Notes |
|-----------------------|--------------------------|-------------------|-------|
| <b>Aggregation</b>    | Public                   | Public            |       |
| Source -> Destination | PatientAssessmentDetai 1 | PatientAssessment |       |

| Connector                   | Source            | Target            | Notes  |
|-----------------------------|-------------------|-------------------|--|
| <b>Association</b> isPartOf | Public            | Public            | Each Assessment always is part of  |
| Unspecified                 | PatientAssessment | PatientCareReport | one PatientCareReport. Each PatientCareReport sometimes includes one or more Assessment. |

#### Attributes

| Attribute              | Notes  | Constraints and tags                                  |
|------------------------|--|---|
| estimatedBodyWeight PQ | The patient's body weight in kilograms, either | Default:  |
| Private                | measured or estimated                          | NEMSIS Reference: { E16_01<br>Estimated Body Weight } |
| [01]                   |  |   |
| broselowLutenColorCode | The Broselow/Luten Color as take from the      | Default:  |
| CD                     | tape   | NEMSIS Reference: { E16_02                            |
| Private                |  | Broselow/Luten Color }                                |
| [01]                   |  |   |

#### **PatientAssessmentDetail**

Type: Class

Status: Proposed. Version 1.0. Phase 1.0. Package: E16\_PatientAssessment Keywords:

Detail: Created on 8/12/2009. Last modified on 8/26/2009. GUID: {252C9F9D-42FB-4431-A25C-5C6D828E32D7}

## **Custom Properties**

• isActive = False

#### **Connections**

| Connector             | Source                 | Target            | Notes |
|-----------------------|------------------------|-------------------|-------|
| Aggregation           | Public                 | Public            |       |
| Source -> Destination | PatientAssessmentDetai | PatientAssessment |       |
|                       | 1                      |                   |       |
|                       |                        |                   |       |

| Attribute                               | Notes  | Constraints and tags  |
|---|--|---|
| dateTimeAssesment<br>TS.DATE<br>Private | The date/time assessment was made on the patient     | Default: NEMSIS Reference: { E16_03 Date/Time Of Assessment } |
| [01]                                    |  |   |
| skinAssessmentCode CD                   | The assessment of the patient's skin on              | Default:  |
| Private                                 | examination  | NEMSIS Reference: { E16_04 Skin Assessment }                  |
| [01]                                    |  |   |
| headFaceAssessmentCod                   |  | D.C. L  |
| e CD                                    | The assessment of the patient's face on examination  | Default: NEMSIS Reference: { E16_05                           |
| Private                                 |  | Head/Face Assessment }  |
| [01]                                    |  |   |
| neckAssessmentCode CD                   | The assessment of the patient's head & neck          | Default:  |
| Private                                 | area on examination                                  | NEMSIS Reference: { E16_06 Neck Assessment }                  |
| [01]                                    |  |   |
|   |  |   |
| chestLungsAssessmentCo<br>de CD         | The assessment of the patient's chest on examination | Default: NEMSIS Reference: { E16_07                           |
| Private                                 |  | Chest/Lungs Assessment }                                      |
| [01]                                    |  |   |
|   |  |   |
|   | The assessment of the patient's heart on             | Default:  |
| Private                                 | examination  | NEMSIS Reference: { E16_08<br>Heart Assessment }              |
| [01]                                    |  |   |
|   |  |   |
|   |  |   |

| Attribute   | Notes  | Constraints and tags   |
|---|--|--|
| abdomenLeftUpperAsses<br>smentCode CD<br>Private<br>[01]  | The assessment of the patient's left upper abdomen on examination  | Default: NEMSIS Reference: { E16_09 Abdomen Left Upper Assessment }  |
| abdomenLeftLowerAsses<br>smentCode CD<br>Private          | The assessment of the patient's left lower abdomen on examination  | Default: NEMSIS Reference: { E16_10 Abdomen Left Lower Assessment }  |
| abdomenRightUpperAsse<br>ssmentCode CD<br>Private<br>[01] | The assessment of the patient's right upper abdomen on examination | Default: NEMSIS Reference: { E16_11 Abdomen Right Upper Assessment } |
| abdomenRightLowerAsse<br>ssmentCode CD<br>Private<br>[01] | The assessment of the patient's right lower abdomen on examination | Default: NEMSIS Reference: { E16_12 Abdomen Right Lower Assessment } |
| gUAssessmentCode CD<br>Private<br>[01]                    | The assessment of the patient's GU area on examination             | Default: NEMSIS Reference: { E16_13 GU Assessment }                  |
| backCervicalAssessment<br>Code CD<br>Private<br>[01]      | The assessment of the patient's back-cervical on examination       | Default: NEMSIS Reference: { E16_14 Back Cervical Assessment }       |

| Attribute   | Notes  | Constraints and tags   |
|---|--|--|
| backThoracicAssessment<br>Code CD<br>Private          | The assessment of the patient's back-thoracic on examination           | Default: NEMSIS Reference: { E16_15 Back Thoracic Assessment }           |
| [01]  |  |  |
| backLumbarSacralAssess<br>mentCode CD<br>Private      | The assessment of the patient's back-<br>lumbar/sacral on examination  | Default: NEMSIS Reference: { E16_16 Back Lumbar/Sacral Assessment }      |
| [01]  |  |  |
| extremitiesRightUpperAs<br>sessmentCode CD<br>Private | The assessment of the patient's right upper extremities on examination | Default: NEMSIS Reference: { E15_17 Extremities-Right Upper Assessment } |
| [01]  |  |  |
| extremitiesRightLowerAs<br>sessmentCode CD<br>Private | The assessment of the patient's right lower extremities on examination | Default: NEMSIS Reference: { E16_18 Extremities-Right Lower Assessment } |
| [01]  |  |  |
| extremetiesLeftUpperAss<br>essmentCode CD<br>Private  | The assessment of the patient's left upper extremities on examination  | Default: NEMSIS Reference: { E16_19 Extremeties-Left Upper Assessment }  |
| [01]  |  |  |
| extremetiesLeftLowerAss<br>essmentCode CD<br>Private  | The assessment of the patient's left lower extremities on examination  | Default: NEMSIS Reference: { E16_20 Extremeties-Left Lower Assessment }  |
| [01]  |  |  |

| Attribute                                    | Notes  | Constraints and tags   |
|--|--|--|
| eyesLeftAssessmentCode<br>CD<br>Private      | The assessment of the patient's left eye on examination            | Default: NEMSIS Reference: { E16_21 Eyes-Left Assessment }     |
| eyeRightAssessmentCode<br>CD<br>Private      | The assessment of the patient's right eye on examination           | Default: NEMSIS Reference: { E16_22 Eyes-Right Assessment }    |
| [01]   |  |  |
| mentalStatusAssessment<br>Code CD<br>Private | The assessment of the patient's mental status on examination       | Default: NEMSIS Reference: { E16_23 Mental Status Assessment } |
| [01]   |  |  |
| neurologicalAssessmentC<br>ode CD<br>Private | The assessment of the patient's neurological status on examination | Default: NEMSIS Reference: { E16_24 Neurological Assessment }  |
| [01]   |  |  |

# **Information Flow Objects**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Static Information Model

 Detail:
 Created on 8/24/2009. Last modified on 8/25/2009

 GUID:
 {B7EBFDF8-C2E7-4ae2-877D-F11D3B790DC7}

# $\underline{EMS\ DAM\ Information\ Flow\ Objects\ Packages} - (Package\ diagram)$

Created By: AbdulMalik Shakir on 8/24/2009

*Last Modified:* 8/24/2009

Version: 1.0. Locked: False

*GUID*: {FF8B2EAB-0D70-46e9-8639-BBEC885A585F}

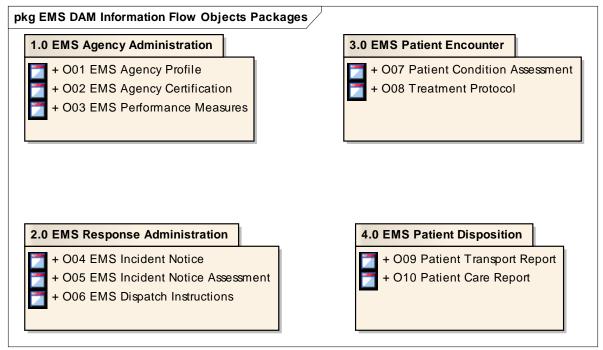


Figure: 43

# $\underline{EMS\ DAM\ Information\ Flow\ Objects}} - (Object\ diagram)$

Created By: AbdulMalik Shakir on 8/24/2009

*Last Modified:* 8/26/2009

Version: 1.0. Locked: False

*GUID*: {76D54306-5324-4093-94A5-B0B0E61428D7}

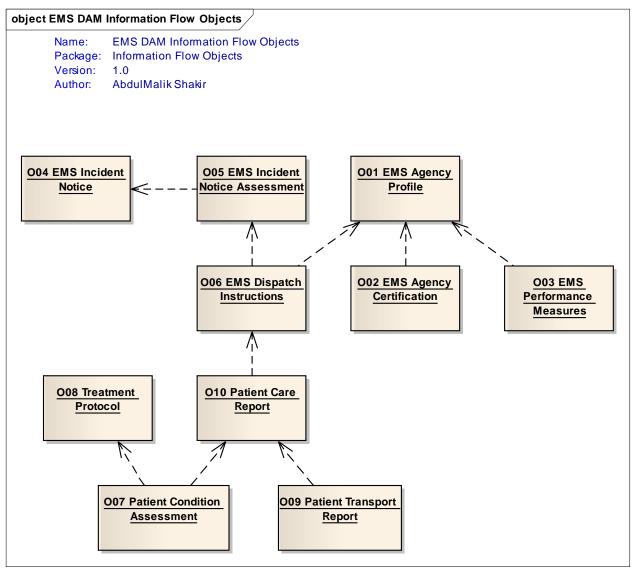


Figure: 44

# 1.0 EMS Agency Administration

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Information Flow Objects

Detail: Created on 8/24/2009. Last modified on 8/24/2009 GUID: {77C15AB1-0549-4056-A859-0E37A1279DEA}

# 1.0 EMS Agency Administration - (Object diagram)

Created By: AbdulMalik Shakir on 8/24/2009

*Last Modified:* 8/26/2009

Version: 1.0. Locked: False

*GUID*: {804FF807-D299-44bc-BB48-F2F7A08E35AC}

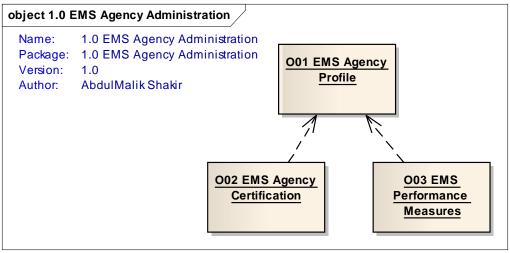


Figure: 45

# **O01 EMS Agency Profile**

Type: Object

Status: Proposed. Version 1.0. Phase 1.0.

Package:1.0 EMS Agency AdministrationKeywords:Detail:Created on 7/28/2009. Last modified on 8/24/2009.GUID:{4DEAFF7B-0760-407c-8A5E-187B75991335}

| Connector               | Source              | Target             | Notes |
|-------------------------|---------------------|--------------------|-------|
| Dependency              | Public              | Public             |       |
| Source -> Destination   | O02 EMS Agency      | O01 EMS Agency     |       |
|                         | Certification       | Profile            |       |
|                         |                     |                    |       |
| <b>Dependency</b>       | Public              | Public             |       |
| Source -> Destination   | O03 EMS Performance | O01 EMS Agency     |       |
|                         | Measures            | Profile            |       |
|                         |                     |                    |       |
| <b>Dependency</b>       | Public              | Public             |       |
| Source -> Destination   | O06 EMS Dispatch    | O01 EMS Agency     |       |
|                         | Instructions        | Profile            |       |
|                         |                     |                    |       |
| <b>Information Flow</b> | Public              | Public             |       |
| Source -> Destination   | O01 EMS Agency      | 1.3 Monitor EMS    |       |
|                         | Profile             | Agency Performance |       |
|                         |                     |                    |       |
| <b>Information Flow</b> | Public              | Public             |       |
| Source -> Destination   | 1.1 Maintain EMS    | O01 EMS Agency     |       |
|                         | Agency Profile      | Profile            |       |
|                         |                     |                    |       |
| <b>Information Flow</b> | Public              | Public             |       |
| Source -> Destination   | O01 EMS Agency      | 1.2 Certify EMS    |       |

| Connector | Source  | Target | Notes |
|-----------|---------|--------|-------|
|           | Profile | Agency |       |
|           |         |        |       |

# **O02 EMS Agency Certification**

Type: Object

Status: Proposed. Version 1.0. Phase 1.0.

Package: 1.0 EMS Agency Administration Keywords:
Detail: Created on 7/28/2009. Last modified on 8/24/2009.
GUID: {8B1C4934-F194-441f-9B1F-9A84BD7361BA}

## **Connections**

| Connector                                 | Source                                    | Target  | Notes |
|---|---|---|-------|
| Dependency<br>Source -> Destination       | Public O02 EMS Agency Certification       | Public<br>O01 EMS Agency<br>Profile             |       |
| Information Flow Source -> Destination    | Public<br>1.2 Certify EMS<br>Agency       | Public<br>O02 EMS Agency<br>Certification       |       |
| Information Flow<br>Source -> Destination | Public<br>O02 EMS Agency<br>Certification | Public<br>1.3 Monitor EMS<br>Agency Performance |       |

## **O03 EMS Performance Measures**

Type: Object

Status: Proposed. Version 1.0. Phase 1.0.

Package:1.0 EMS Agency AdministrationKeywords:Detail:Created on 7/28/2009. Last modified on 8/24/2009.GUID:{763480B8-6BC4-4dcd-92D6-2178BEEDE215}

| Connector               | Source              | Target              | Notes |
|-------------------------|---------------------|---------------------|-------|
| <u>Dependency</u>       | Public              | Public              |       |
| Source -> Destination   | O03 EMS Performance | O01 EMS Agency      |       |
|                         | Measures            | Profile             |       |
| <b>Information Flow</b> | Public              | Public              |       |
| Source -> Destination   | 1.3 Monitor EMS     | O03 EMS Performance |       |
|                         | Agency Performance  | Measures            |       |
|                         |                     |                     |       |

# 2.0 EMS Response Administration

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Information Flow Objects

Detail: Created on 8/24/2009. Last modified on 8/24/2009 GUID: {3F972746-E6EC-4866-BA4C-C26DA9B0B902}

# $\underline{\textbf{2.0 EMS Response Administration}} \text{ - } (Object \ diagram)$

Created By: AbdulMalik Shakir on 8/24/2009

*Last Modified:* 8/26/2009

Version: 1.0. Locked: False

*GUID*: {57612023-90EE-48f2-8868-017E24E7D57E}

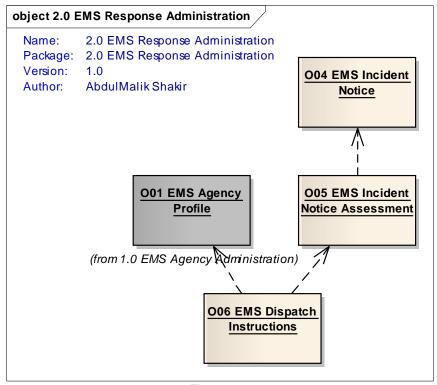


Figure: 46

## **O04 EMS Incident Notice**

Type: Object

Status: Proposed. Version 1.0. Phase 1.0.

Package:2.0 EMS Response AdministrationKeywords:Detail:Created on 8/24/2009. Last modified on 8/24/2009.GUID:{CD7F3129-8417-4de0-ADED-0EDA3986E704}

## **Connections**

| Connector               | Source                | Target           | Notes |
|-------------------------|-----------------------|------------------|-------|
| Dependency              | Public                | Public           |       |
| Source -> Destination   | O05 EMS Incident      | O04 EMS Incident |       |
|                         | Notice Assessment     | Notice           |       |
|                         |                       |                  |       |
| <b>Information Flow</b> | Public                | Public           |       |
| Source -> Destination   | 2.1 Provide EMS       | O04 EMS Incident |       |
|                         | Incident Notification | Notice           |       |
|                         |                       |                  |       |
| <b>Information Flow</b> | Public                | Public           |       |
| Source -> Destination   | O04 EMS Incident      | 2.2 Access EMS   |       |
|                         | Notice                | Incident Notice  |       |
|                         |                       |                  |       |

## **O05 EMS Incident Notice Assessment**

*Type:* Object

Status: Proposed. Version 1.0. Phase 1.0.

Package:2.0 EMS Response AdministrationKeywords:Detail:Created on 8/24/2009. Last modified on 8/24/2009.GUID:{9682865D-21A1-4547-AB3F-2AE581863578}

#### **Connections**

| Connector               | Source            | Target            | Notes |
|-------------------------|-------------------|-------------------|-------|
| Information Flow        | Public            | Public            |       |
| Source -> Destination   | 2.2 Access EMS    | O05 EMS Incident  |       |
|                         | Incident Notice   | Notice Assessment |       |
| Dependency              | Public            | Public            |       |
| Source -> Destination   | O06 EMS Dispatch  | O05 EMS Incident  |       |
|                         | Instructions      | Notice Assessment |       |
| Dependency              | Public            | Public            |       |
| Source -> Destination   | O05 EMS Incident  | O04 EMS Incident  |       |
|                         | Notice Assessment | Notice            |       |
| <b>Information Flow</b> | Public            | Public            |       |
| Source -> Destination   | O05 EMS Incident  | 2.3 Dispatch EMS  |       |
|                         | Notice Assessment | Personnel         |       |

# **O06 EMS Dispatch Instructions**

Type: Object

Status: Proposed. Version 1.0. Phase 1.0.

Package:2.0 EMS Response AdministrationKeywords:Detail:Created on 8/24/2009. Last modified on 8/24/2009.GUID:{84C6F8B6-760F-4ca8-B66F-6918E9970C27}

#### **Connections**

# 3.0 EMS Patient Encounter

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Information Flow Objects

 Detail:
 Created on 8/24/2009. Last modified on 8/24/2009

 GUID:
 {8D7D6AD6-8518-46ff-957D-D5FCD4175028}

3.0 EMS Patient Encounter - (Object diagram)
Created By: AbdulMalik Shakir on 8/24/2009

*Last Modified:* 8/26/2009

Version: 1.0. Locked: False

*GUID*: {58BDCDDE-1823-4fb1-A4E1-7E666901C2C1}

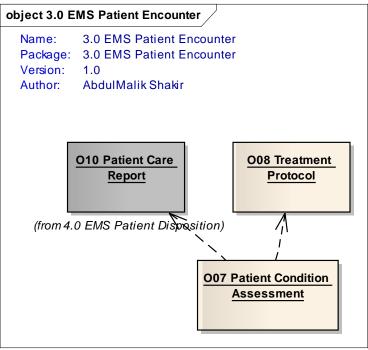


Figure: 47

## **007 Patient Condition Assessment**

Type: Object

Status: Proposed. Version 1.0. Phase 1.0.

Package: 3.0 EMS Patient Encounter Keywords:

*Detail: Created on 8/24/2009. Last modified on 8/24/2009. GUID:* {FD976073-22E7-49db-BD90-F49D2E011ED1}

| Connector               | Source                | Target                 | Notes |
|-------------------------|-----------------------|------------------------|-------|
| <b>Information Flow</b> | Public                | Public                 |       |
| Source -> Destination   | O07 Patient Condition | 3.3 Provide Medical    |       |
|                         | Assessment            | Oversight              |       |
| Dependency              | Public                | Public                 |       |
| Source -> Destination   | O07 Patient Condition | O10 Patient Care       |       |
|                         | Assessment            | Report                 |       |
| Dependency              | Public                | Public                 |       |
| Source -> Destination   | O07 Patient Condition | O08 Treatment Protocol |       |
|                         | Assessment            |                        |       |
| Information Flow        | Public                | Public                 |       |
| Source -> Destination   | O07 Patient Condition | 3.2 Treat Patient      |       |
|                         | Assessment            |                        |       |
|                         |                       |                        |       |

| Connector               | Source             | Target                | Notes |
|-------------------------|--------------------|-----------------------|-------|
| <b>Information Flow</b> | Public             | Public                |       |
| Source -> Destination   | 3.1 Assess Patient | O07 Patient Condition |       |
|                         | Condition          | Assessment            |       |
|                         |                    |                       |       |

#### **O08 Treatment Protocol**

Type: Object

Status: Proposed. Version 1.0. Phase 1.0.

Package: 3.0 EMS Patient Encounter Keywords:

*Detail: Created on 8/24/2009. Last modified on 8/24/2009. GUID:* {0062CEF2-90A4-420e-9BCB-CE472FDD6497}

#### **Connections**

| Connector               | Source                 | Target                 | Notes |
|-------------------------|------------------------|------------------------|-------|
| <b>Information Flow</b> | Public                 | Public                 |       |
| Source -> Destination   | 3.3 Provide Medical    | O08 Treatment Protocol |       |
|                         | Oversight              |                        |       |
|                         |                        |                        |       |
| <u>Dependency</u>       | Public                 | Public                 |       |
| Source -> Destination   | O07 Patient Condition  | O08 Treatment Protocol |       |
|                         | Assessment             |                        |       |
|                         |                        |                        |       |
| Information Flow        | Public                 | Public                 |       |
| Source -> Destination   | O08 Treatment Protocol | 3.2 Treat Patient      |       |
|                         |                        |                        |       |

# 4.0 EMS Patient Disposition

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Information Flow Objects

Detail: Created on 8/24/2009. Last modified on 8/24/2009 GUID: {3B474C17-8781-4ac3-A279-EDB8E6A698E8}

**4.0 EMS Patient Disposition** - (Object diagram)

Created By: AbdulMalik Shakir on 8/24/2009

*Last Modified:* 8/26/2009

Version: 1.0. Locked: False

*GUID*: {3847FE26-C264-4f89-8547-1ACE0673BDE2}

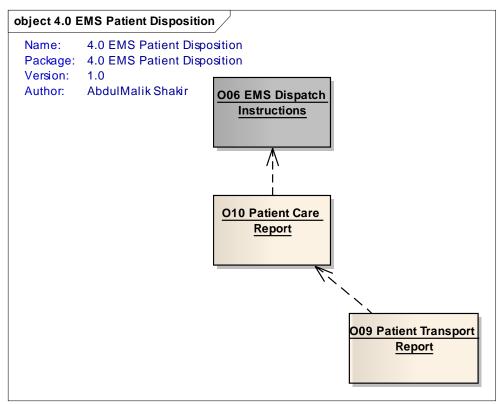


Figure: 48

# **009 Patient Transport Report**

Type: Object

Status: Proposed. Version 1.0. Phase 1.0.

Package: 4.0 EMS Patient Disposition Keywords:

Detail: Created on 8/24/2009. Last modified on 8/24/2009. GUID: {516AA960-381C-440d-BEAC-A6C3E912E074}

### **Connections**

| Connector                              | Source                                    | Target                                    | Notes |
|--|---|---|-------|
| Dependency Source -> Destination       | Public<br>O09 Patient Transport<br>Report | Public<br>O10 Patient Care<br>Report      |       |
| Information Flow Source -> Destination | Public<br>4.1 Transport Patient           | Public<br>O09 Patient Transport<br>Report |       |

# **O10 Patient Care Report**

Type: Object

Status: Proposed. Version 1.0. Phase 1.0.

Package: 4.0 EMS Patient Disposition Keywords:

Detail: Created on 8/24/2009. Last modified on 8/24/2009. GUID: {71A3D455-58CA-41a7-92F8-6F6844B28D14}

#### **Connections**

| Connector               | Source                | Target           | Notes |
|-------------------------|-----------------------|------------------|-------|
| <b>Dependency</b>       | Public                | Public           |       |
| Source -> Destination   | O10 Patient Care      | O06 EMS Dispatch |       |
|                         | Report                | Instructions     |       |
| Dependency              | Public                | Public           |       |
| Source -> Destination   | O09 Patient Transport | O10 Patient Care |       |
|                         | Report                | Report           |       |
| Dependency              | Public                | Public           |       |
| Source -> Destination   | O07 Patient Condition | O10 Patient Care |       |
|                         | Assessment            | Report           |       |
| Information Flow        | Public                | Public           |       |
| Source -> Destination   | 4.2 Transfer Medical  | O10 Patient Care |       |
|                         | Control               | Report           |       |
| <b>Information Flow</b> | Public                | Public           |       |
| Source -> Destination   | 3.2 Treat Patient     | O10 Patient Care |       |
|                         |                       | Report           |       |

# LocalDatatypes

*Type:* Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Static Information Model

Detail: Created on 5/30/2009. Last modified on 6/16/2009 GUID: {9B985707-963E-4bbd-A050-8D58FC2C4DAF}

# $\underline{\textbf{LocalDatatypes Package Diagram}} \text{-} (Package \ diagram)$

Created By: AbdulMalik Shakir on 6/16/2009

*Last Modified:* 6/16/2009

Version: 1.0. Locked: False

*GUID*: {6CCFE2B4-6630-4aee-8DD7-6961F7C09D6C}

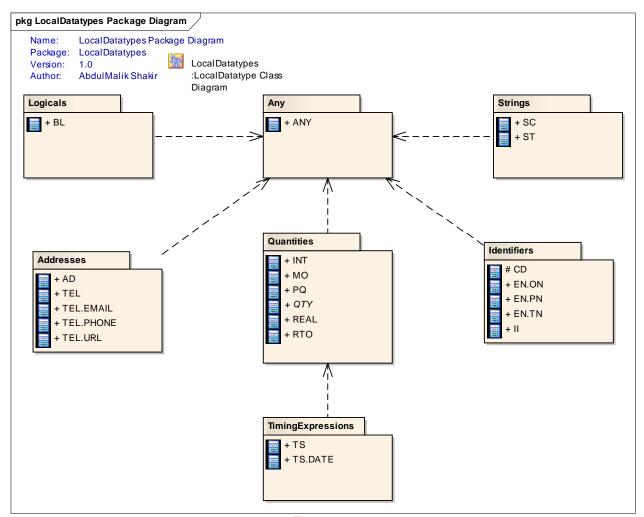


Figure: 49

## <u>LocalDatatype Class Diagram</u> - (*Logical diagram*) *Created By:* AbdulMalik Shakir *on* 5/30/2009

*Last Modified:* 6/16/2009

Version: 1.0. Locked: False

GUID: {AE1F4F36-FEAF-4e10-87A6-2EE9A36E238A}

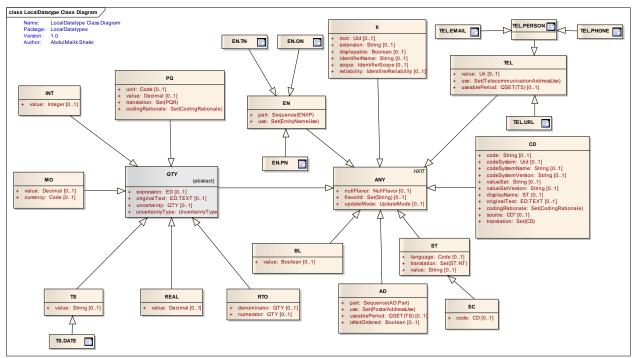


Figure: 50

# LocalDatatype Class Diagram

*Type:* Text

Status: Proposed. Version 1.0. Phase 1.0. Package: LocalDatatypes Keywords:

Detail: Created on 6/16/2009. Last modified on 6/16/2009. GUID: {6A230467-7839-46f3-82AC-6804479B9D73}

LocalDatatypes:LocalDatatype Class Diagram

# Any

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: LocalDatatypes

Detail: Created on 6/16/2009. Last modified on 6/16/2009 GUID: {9D58A26C-BEFF-4ecd-A672-464243544C1B}

Any - (Logical diagram)

Created By: AbdulMalik Shakir on 6/16/2009

*Last Modified:* 6/16/2009

Version: 1.0. Locked: False

*GUID*: {89C8D4F6-110A-4354-9F91-E433648F5474}

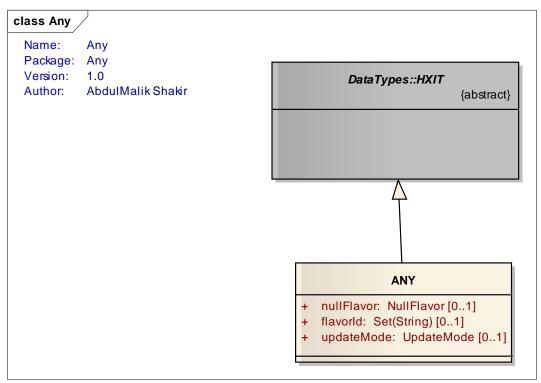


Figure: 51

#### **ANY**

Type: Class HXIT

Status: Proposed. Version 1.0. Phase 1.0.

Package: Any Keywords:

Detail: Created on 7/26/2006. Last modified on 6/16/2009. GUID: {2147B873-37D4-4146-9287-C16E658C6A86}

Defines the basic properties of every data value. This is conceptually an abstract type, meaning that no proper value can be just a data value without belonging to any concrete type. Every public concrete type is a specialization of this general abstract DataValue type.

However exceptional values (null values) may be of type ANY, except for the exceptional values that imply the nullFlavor INV, since this requires a type to be meaningful.

### **Constraints**

no ANY unless null: (Invariant, Status is Approved)
 def: let isNull: Boolean = nullFlavor.oclIsDefined
 def: let isNotNull: Boolean = not isNull
 def: let noUpdate: Boolean = updateMode.oclIsUndefined
 def: let noUpdateOrHistory(): Boolean = noUpdate and
 noHistory
 def: let noUpdateOrHistory(member: ANY): Boolean =
 member.oclIsDefined implies member.noUpdate and
 member.noHistory

inv "no ANY unless null": (isNotNull or

# **Constraints**

nullFlavor.implies(NullFlavor.INV)) implies not oclIsTypeOf(ANY)

# **Custom Properties**

• isActive = False

| <u>Connections</u>                   |          |        |       |
|--------------------------------------|----------|--------|-------|
| Connector                            | Source   | Target | Notes |
| Generalization                       | Public   | Public |       |
| Source -> Destination                | ST       | ANY    |       |
| D - 12 - 42                          | D. 1.11. | D 1.11 |       |
| Realisation                          | Public   | Public |       |
| Source -> Destination                | ANY      | ANY    |       |
| Generalization                       | Public   | Public |       |
| Source -> Destination                | UVP      | ANY    |       |
| Generalization                       | Public   | Public |       |
| Source -> Destination                | CS       | ANY    |       |
| Source -> Destination                | CS       | ANI    |       |
| Generalization                       | Public   | Public |       |
| Source -> Destination                | GLIST    | ANY    |       |
| Generalization                       | Public   | Public |       |
| Source -> Destination                | TEL      | ANY    |       |
|                                      |          |        |       |
| Generalization                       | Public   | Public |       |
| Source -> Destination                | BL       | ANY    |       |
| Generalization                       | Public   | Public |       |
| Source -> Destination                | QTY      | ANY    |       |
| <b>Generalization</b>                | Public   | Public |       |
| Source -> Destination                | ANY      | HXIT   |       |
| Source -> Destination                | ANI      | ПАП    |       |
| Generalization                       | Public   | Public |       |
| Source -> Destination                | COLL     | ANY    |       |
| Generalization                       | Public   | Public |       |
| Source -> Destination                | Term     | ANY    |       |
| Source -> Destination                | Term     | ANI    |       |
| Generalization                       | Public   | Public |       |
| Source -> Destination                | AD       | ANY    |       |
| NoteLink                             | Public   | Public |       |
|                                      | ANY      | Note   |       |
| Consultantion                        | Public   | Public |       |
| Generalization Source -> Destination |          |        |       |
| Source -> Destination                | SLIST    | ANY    |       |
|                                      |          |        |       |

| Connector             | Source | Target | Notes |
|-----------------------|--------|--------|-------|
| Generalization        | Public | Public |       |
| Source -> Destination | ED     | ANY    |       |
| Generalization        | Public | Public |       |
| Source -> Destination | EN     | ANY    |       |
| Generalization        | Public | Public |       |
| Source -> Destination | QSET   | ANY    |       |
| Generalization        | Public | Public |       |
| Source -> Destination | NPPD   | ANY    |       |
| Generalization        | Public | Public |       |
| Source -> Destination | CD     | ANY    |       |
| Generalization        | Public | Public |       |
| Source -> Destination | II     | ANY    |       |
|                       |        |        |       |

# **Attributes**

| Attribute             | Notes  | Constraints and tags |
|-----------------------|--|----------------------|
| nullFlavor NullFlavor | Though the nullFlavor concept has some                                       | Default:             |
| Public                | relationship with the UML/OCL null, it is not                                |                      |
|                       | the same thing, and the relationship and differences between the two must be |                      |
| [01]                  | understood to properly implement this  |                      |
| [01]                  | specification. For further discussion, see                                   |                      |
|                       | section 7.1.3 (Null and NullFlavor). Note that                               |                      |
|                       | nullFlavor includes the concept of a UML null                                |                      |
|                       | value, and also includes potentially fully                                   |                      |
|                       | populated instances that do not conform to the                               |                      |
|                       | requirements placed on the instance (also                                    |                      |
|                       | known as "exceptional instances"). Both                                      |                      |
|                       | nonNull and null values SHALL always be                                      |                      |
|                       | valid according to the rules expressed in this                               |                      |
|                       | specification.   |                      |
| flavorId Set(String)  | This property allows a sending system to                                     | Default:             |
| Public                | identify the role that the attribute plays in                                |                      |
|                       | processing the instance that is being  |                      |
|                       | represented. The principal purpose of  |                      |
| [01]                  | UpdateMode is to allow a sending system to                                   |                      |
|                       | identify to a receiving system the changes that                              |                      |
|                       | have occurred in an object controlled by the                                 |                      |
|                       | sending system; or the changes that the sender                               |                      |
|                       | desires to be made in an object controlled by                                |                      |
|                       | the receiving system.  |                      |
|                       | If no updateMode is provided, there is no                                    |                      |
|                       | information as to how this information updates                               |                      |
|                       | any existing information. The descriptions                                   |                      |
|                       | above use the word "matching". For the                                       |                      |
|                       | purposes of data types, this means the equality                              |                      |
|                       | operations defined in this specification (in other                           |                      |

| Attribute                              | Notes   | Constraints and tags |
|--|---|----------------------|
|  | contexts "matching" may haves other meanings).  Note that updateMode does not affect the semantics or behaviour of the data type itself, but may affect the behaviour of systems processing objects containing instances of the data type.  |                      |
| <b>updateMode</b> UpdateMode<br>Public | Signals the imposition of a set of constraints on the data type. The sole purpose of specifying   | Default:             |
|  | that a constraint that has been used to further constrain the data type is to support validation  |                      |
| [01]                                   | of the instance: a validation engine can look up the rules expressed for the type and confirm that the instance conforms to the rules for the flavor. No other processing should depend on the content of the flavor attribute.  No other semantic or computational use SHALL depend on the value of this property. If this value is populated, the data type flavor SHALL be a valid constraint on the type of the value. If this value is populated, the data type flavor SHALL be a valid constraint on the type of the value. |                      |

**Operations** 

| Method                      | Notes  | Parameters |
|-----------------------------|--|------------|
| equals() BL<br>Public       | By default, equals is determined as specified below. Selected specializations of ANY override equals to specify how semantic equality is evaluated for the type. Each type clearly documents how equality is determined.                 | ANY [in] x |
| isNull() Boolean<br>Public  | Defines whether this type has a nullFlavor or not.  Note: This operation is an exception from the normal rules for operations and nullFlavors: it will return true if the value has a nullFlavor, and false if it does not.              |            |
| nonNull() Boolean<br>Public | Defines whether this type doesn't have a nullFlavor or it does.  Note: This operation is an exception from the normal rules for operations and nullFlavors: it will return false if the value has a nullFlavor, and true if it does not. |            |

# **Addresses**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: LocalDatatypes

Detail: Created on 6/16/2009. Last modified on 6/16/2009 GUID: {16F741E8-111E-4072-A257-E1BE8373F6ED}

<u>Addresses</u> - (Logical diagram)

Created By: AbdulMalik Shakir on 6/16/2009

*Last Modified:* 6/16/2009

Version: 1.0. Locked: False

*GUID*: {D0F064C3-B5F8-43d7-865D-6D317231D291}

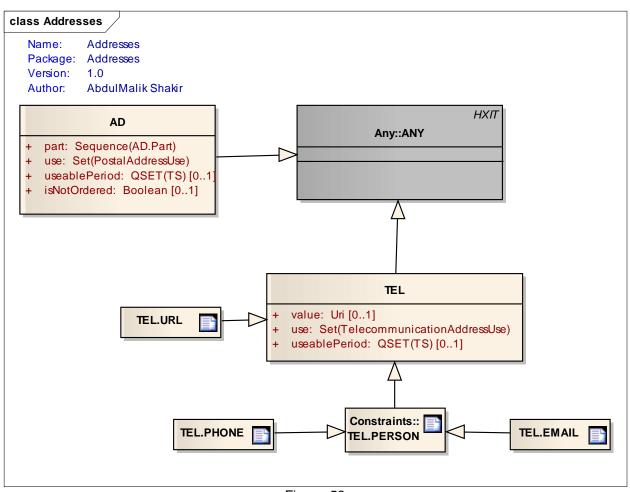


Figure: 52

## AD

Type: Class ANY

Status: Proposed. Version 1.0. Phase 1.0.

Package: Addresses Keywords:

Detail: Created on 7/26/2006. Last modified on 6/16/2009. GUID: {C4FE5E76-4566-4173-B1AA-5A3B10D621E0}

Mailing and home or office addresses.

AD is primarily used to communicate data that will allow printing mail labels, or that will allow a person to physically visit that address. The postal address datatype is not supposed to be a container for additional information that might be useful for finding geographic locations (e.g., GPS coordinates) or for performing epidemiological studies. Such additional information should be captured by other, more appropriate data structures. Addresses are essentially sequences of address parts, but add a "use" code and a valid time range for information about if and when the address can be used for a given purpose.

## **Custom Properties**

• isActive = False

**Connections** 

| Connector             | Source | Target | Notes |
|-----------------------|--------|--------|-------|
| <b>NoteLink</b>       | Public | Public |       |
|                       | AD     | Note   |       |
|                       |        |        |       |
| <b>Generalization</b> | Public | Public |       |
| Source -> Destination | AD     | ANY    |       |
|                       |        |        |       |
| Realisation           | Public | Public |       |
| Source -> Destination | AD     | AD     |       |
|                       |        |        |       |

Attributes

| Attribute                          | Notes   | Constraints and tags |
|------------------------------------|---|----------------------|
| part Sequence(AD.Part) Public      | A sequence of address parts, such as street or post office Box, city, postal code, country, etc.  | Default:             |
| use Set(PostalAddressUse) Public   | A set of codes advising a system or user which address in a set of like addresses to select for a given purpose.  An address without specific use code might be a default address useful for any purpose, but an address with a specific use code would be preferred for that respective purpose.  If populated, the values contained in this attribute SHALL be taken from the HL7 PostalAddressUse code system. | Default:             |
| useablePeriod QSET(TS) Public [01] | A General Timing Specification (GTS) specifying the periods of time during which the address can be used. This is used to specify different addresses for different times of the week or year.  | Default:             |

| Attribute                   | Notes  | Constraints and tags |
|-----------------------------|--|----------------------|
| isNotOrdered Boolean Public | A boolean value specifying whether the order of the address parts is known or not. While the   | Default:             |
| [01]                        | address parts are always a sequence, the order in which they are presented may or may not be known to be true or important. Where this matters, the isNotOrdered property can be used to convey this information |                      |

### TEL

Type: <u>Class ANY</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Addresses Keywords:

Detail: Created on 7/26/2006. Last modified on 6/16/2009. GUID: {E03E16BF-844B-4ab7-8C6D-2E7403D461B3}

A locatable resource that is identified by a URI, such as a web page, a telephone number (voice, fax or some other resource mediated by telecommunication equipment), an e-mail address, or any other locatable resource that can be specified by a URL.

The address is specified as a Universal Resource Locator (URL) qualified by time specification and use codes that help in deciding which address to use for a given time and purpose.

Note 1: The value attribute is constrained to be a uniform resource locator specified according to IETF RFCs 1738 and 2806 when used in this data type.

Note 2: The intent of this data type is to be a locator, not an identifier; this data type is used to refer to a locatable resource using a URL, and knowing the URI allows one to locate the object. However some use cases have arisen where a URI is used to refer to a locatable resource. Though this data type allows for URIs to be used, the resource identified SHOULD always be locatable. A common use of URI's is to refer to SOAP attachments.

## **Custom Properties**

• isActive = False

| Connector             | Source     | Target | Notes |
|-----------------------|------------|--------|-------|
| <u>NoteLink</u>       | Public     | Public |       |
|                       | TEL        | Note   |       |
| Generalization        | Public     | Public |       |
| Source -> Destination | TEL        | ANY    |       |
| Generalization        | Public     | Public |       |
| Source -> Destination | TEL.PERSON | TEL    |       |
| Generalization        | Public     | Public |       |
| Source -> Destination | TEL.URL    | TEL    |       |
| Realisation           | Public     | Public |       |

| Connector             | Source | Target | Notes |
|-----------------------|--------|--------|-------|
| Source -> Destination | TEL    | TEL    |       |
|                       |        |        |       |

## **Attributes**

| Attribute               | Notes  | Constraints and tags |
|-------------------------|--|----------------------|
| value Uri               | A uniform resource identifier specified          | Default:             |
| Public                  | according to IETF RFC 2396.                      |                      |
|                         | The URI specifies the protocol and the contact   |                      |
|                         | point defined by that protocol for the resource. |                      |
| [01]                    | Examples: Notable uses of the                    |                      |
|                         | telecommunication address datatype are for       |                      |
|                         | telephone and telefax numbers, e-mail            |                      |
|                         | addresses, Hypertext references, FTP             |                      |
|                         | references, etc.                                 |                      |
| use                     | One or more codes advising system or user        | Default:             |
| Set(TelecommunicationAd | which telecommunication address in a set of      |                      |
| dressUse)               | like addresses to select for a given             |                      |
| Public                  | telecommunication need.                          |                      |
|                         | Note: The telecommunication use code is not a    |                      |
|                         | complete classification for equipment types or   |                      |
|                         | locations. Its main purpose is to suggest or     |                      |
|                         | discourage the use of a particular               |                      |
|                         | telecommunication address. There are no easily   |                      |
|                         | defined rules that govern the selection of a     |                      |
|                         | telecommunication address.                       |                      |
|                         | If populated, the values contained in this       |                      |
|                         | attribute SHALL be taken from the HL7            |                      |
|                         | TelecommunicationAddressUse code system          |                      |
| useablePeriod QSET(TS)  | Specifies the periods of time during which the   | Default:             |
| Public                  | telecommunication address can be used.           |                      |
|                         | Note: For a telephone number, this can           |                      |
|                         | indicate the time of day in which the party can  |                      |
| [01]                    | be reached on that telephone. For a web          |                      |
|                         | address, it may specify a time range in which    |                      |
|                         | the web content is promised to be available      |                      |
|                         | under the given address.                         |                      |

# **Operations**

| Method          | Notes   | Parameters |
|-----------------|---|------------|
| canonical() TEL | The TEL with any seperator or other non-          |            |
| Public          | significant characters stripped out of the        |            |
|                 | address.  |            |
|                 | Note: The tel: syntax allows for characters such  |            |
|                 | as ( and ) which are syntactical separator        |            |
|                 | characters but do not change the actual           |            |
|                 | telephone number. canonical strips characters     |            |
|                 | like these out of the address portion. The actual |            |
|                 | characters stripped out depends on the scheme.    |            |
|                 |   |            |

## **TEL.EMAIL**

Type: <u>Class</u> <u>TEL.PERSON</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Addresses Keywords:

Detail: Created on 6/26/2007. Last modified on 6/16/2009. GUID: {4086EB4E-170B-475c-98A9-14BF17988F8B}

TEL.EMAIL constrains the TEL.PERSON type to be an email address.

## **Custom Properties**

• isActive = False

### **Connections**

| Connections           |           |            |       |  |
|-----------------------|-----------|------------|-------|--|
| Connector             | Source    | Target     | Notes |  |
| NoteLink              | Public    | Public     |       |  |
|                       | Note      | TEL.EMAIL  |       |  |
|                       |           |            |       |  |
| <b>Realisation</b>    | Public    | Public     |       |  |
| Source -> Destination | TEL.EMAIL | TEL.EMAIL  |       |  |
|                       |           |            |       |  |
| <b>Generalization</b> | Public    | Public     |       |  |
| Source -> Destination | TEL.EMAIL | TEL.PERSON |       |  |
|                       |           |            |       |  |

## **TEL.PHONE**

Type: <u>Class</u> <u>TEL.PERSON</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Addresses Keywords:

 Detail:
 Created on 6/26/2007. Last modified on 6/16/2009.

 GUID:
 {189D93EF-4CFF-4b0b-8486-7FDD776F17E6}

TEL.PHONE constrains TEL.PERSON so it must refer to some telephone based communication system with a person.

## **Custom Properties**

• isActive = False

| Connector             | Source    | Target    | Notes |
|-----------------------|-----------|-----------|-------|
| <b>NoteLink</b>       | Public    | Public    |       |
|                       | Note      | TEL.PHONE |       |
|                       |           |           |       |
| Realisation           | Public    | Public    |       |
| Source -> Destination | TEL.PHONE | TEL.PHONE |       |
|                       |           |           |       |

| Connector             | Source    | Target     | Notes |
|-----------------------|-----------|------------|-------|
| Generalization        | Public    | Public     |       |
| Source -> Destination | TEL.PHONE | TEL.PERSON |       |
|                       |           |            |       |

## **TEL.URL**

Type: <u>Class</u> <u>TEL</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Addresses Keywords:

*Detail: Created on 6/26/2007. Last modified on 6/16/2009. GUID:* {BC31AD66-1D75-457b-84F2-ED55EF863BAE}

TEL.URL constrains TEL so that it must point to a locatable resource that returns binary content.

## **Custom Properties**

• isActive = False

### **Connections**

| Connector             | Source  | Target  | Notes |  |
|-----------------------|---------|---------|-------|--|
| <u>NoteLink</u>       | Public  | Public  |       |  |
|                       | Note    | TEL.URL |       |  |
| Generalization        | Public  | Public  |       |  |
| Source -> Destination | TEL.URL | TEL     |       |  |
|                       | 211     | B 111   |       |  |
| <b>Realisation</b>    | Public  | Public  |       |  |
| Source -> Destination | TEL.URL | TEL.URL |       |  |
|                       |         |         |       |  |

# **Identifiers**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: LocalDatatypes

Detail: Created on 6/16/2009. Last modified on 6/16/2009 GUID: {BEC56732-E7B2-4a94-94D4-C086586E3988}

 $\underline{\textbf{Identifiers}} \cdot (Logical \ diagram)$ 

Created By: AbdulMalik Shakir on 6/16/2009

*Last Modified:* 6/16/2009

Version: 1.0. Locked: False

GUID: {B1B71B29-1E65-43e0-825A-0CBEAFC1B4E3}

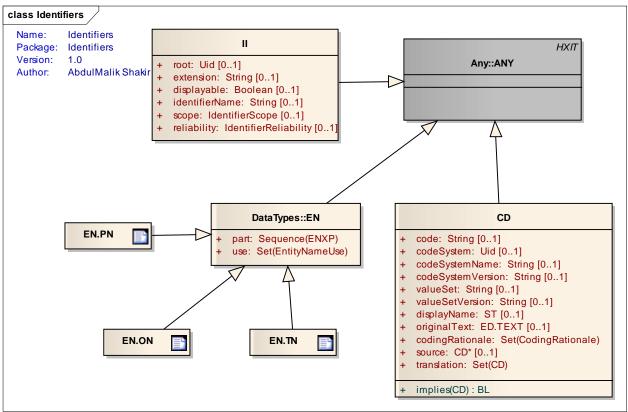


Figure: 53

### CD

Type: Class ANY

Status: Proposed. Version 1.0. Phase 1.0.

Package: Identifiers Keywords:

Detail: Created on 2/7/2008. Last modified on 6/16/2009. GUID: {73926D92-AFCD-4e73-A103-110836AD712E}

A CD may contain a simple code - that is, a reference to a concept defined directly by the referenced code system, or it may contain an expression in some syntax defined by the referenced code system that can be meaningfully evaluated. e.g., the concept of a "left foot" as a postcoordinated term built from the primary code "FOOT" and the qualifier "LEFT".

A CD may also contain an original text or phrase that served as the basis of the coding. This is preserved to allow for validation of the representation of the concept in various fashions. If the concept (the intent of the original text) cannot be properly represented, then the nullFlavor of the CD should be set to "OTH" (other) and either a reference to a code system or a value set (which may refer to multiple code systems) SHALL be provided.

A CD can contain one or more translations into multiple coding systems. The translations are all representations of the same concept in various code systems. There is only one concept, and only the first CD may contain an original text. It is possible to represent the translation chain - which CD was translated from which - if desired. Each CD may also carry a rationale to indicate why it is represented.

A CD with no nullFlavor attribute SHALL have a code attribute or nonNull originalText attribute. A CD that has a code, codeSystem or originalText attribute but does not meet external constraints on the codeSystem SHALL have a nullFlavor attribute with a value of "OTH".

Attributes with type CD are generally bound by externally specified constraints which constrain the coded concepts to which a CD may refer. These constraints may be qualified as "extensible" (CWE) or "not extensible" (CNE). If the constraint is not extensible (CNE), then a the CD that does not have a nullFlavor SHALL contain a code that

conforms to the constraint. If the constraint is extensible (CWE) then a CD that does not have a nullFlavor SHALL contain either a code that exists in the domain with which the attribute is associated, a code from a locally defined code system, or just some originalText that describes the concept. If the code is taken from a locally defined code system, then the codeSystem property SHALL specify the local code system.

For both CNE and CWE constraint types, the translations may contain nonNull codes from any source unless otherwise specified by the constraining model.

## **Custom Properties**

• isActive = False

## **Connections**

| Connector             | Source         | Target       | Notes |  |
|-----------------------|----------------|--------------|-------|--|
| <u>NoteLink</u>       | Public<br>Note | Public<br>CD |       |  |
|                       | Note           | СБ           |       |  |
| Generalization        | Public         | Public       |       |  |
| Source -> Destination | CD.CV          | CD           |       |  |
| Generalization        | Public         | Public       |       |  |
| Source -> Destination | CD.CV          | CD           |       |  |
| Generalization        | Public         | Public       |       |  |
| Source -> Destination | CD             | ANY          |       |  |
| Realisation           | Public         | Public       |       |  |
| Source -> Destination | CD             | CD           |       |  |
| Generalization        | Public         | Public       |       |  |
| Source -> Destination | PQR            | CD           |       |  |

## Attributes

| Attribute   | Notes  | Constraints and tags |
|-------------|--|----------------------|
| code String | The plain code symbol defined by the code          | Default:             |
| Public      | system, or an expression in a syntax defined by    |                      |
|             | the code system which describes the concept.       |                      |
|             | If a code is provided, it SHALL be an exact        |                      |
| [01]        | match to a plain code symbol or expression         |                      |
|             | defined by the code system. If the code system     |                      |
|             | defines a code or expression that includes         |                      |
|             | whitespace, the code SHALL include the             |                      |
|             | whitespace. An expression can only be used         |                      |
|             | where the codeSystem either defines an             |                      |
|             | expression syntax, or there is a generally         |                      |
|             | accepted syntax for the codeSystem. A code         |                      |
|             | system may be defined that only defines an         |                      |
|             | expression syntax with bindings to other code      |                      |
|             | Systems for the elements of the expression.        |                      |
|             | It is at the discretion of the interpreting system |                      |
|             | whether to check for an expression instead of a    |                      |

| Attribute             | Notes  | Constraints and tags |
|-----------------------|--|----------------------|
|                       | simple code and evaluate the expression instead      |                      |
|                       | of treating the expression as a code. In some        |                      |
|                       | cases, it may be unclear or ambiguous whether        |                      |
|                       | the code represents a single symbol or an            |                      |
|                       | expression. This usually arises where the code       |                      |
|                       | system defines an expression language and then       |                      |
|                       | defines pre-coordinated concepts with symbols        |                      |
|                       | which match their expression, e.g. UCUM. In          |                      |
|                       | other cases, it is safe to treat the expression as a |                      |
|                       | symbol. There is no guarantee that this is           |                      |
|                       | always safe: the definitions of the codeSystem       |                      |
|                       | should always be consulted to determine how          |                      |
|                       | to handle potential expressions.                     |                      |
| codeSystem Uid        | Specifies the code system that defines the code,     | Default:             |
| Public                | or if no code was found, the codeSystem in           |                      |
|                       | which no code was found.                             |                      |
|                       | Code systems SHALL be referred to by a UID,          |                      |
| [01]                  | which allows unambiguous reference to                |                      |
|                       | standard code systems and other local                |                      |
|                       | codesystems. Where either ISO or HL7 have            |                      |
|                       | assigned UID to code Systems, then these UIDs        |                      |
|                       | SHALL be used. Otherwise implementations             |                      |
|                       | SHALL use an appropriate ISO Object                  |                      |
|                       | Identifier (OID) or UUID to construct a              |                      |
|                       | globally unique local coding system identifier.      |                      |
|                       | A CD that has a code attributes SHALL have a         |                      |
|                       | codeSystem specifying the system of concepts         |                      |
|                       | that defines the code.                               |                      |
|                       | An CD with a nullFlavor OTH indicates that a         |                      |
|                       | concept could not be coded in the coding             |                      |
|                       | system or value set specified. Thus, for these       |                      |
|                       | coding exceptions, the code system or value set      |                      |
|                       | that did not contain the appropriate concept         |                      |
|                       | SHALL be provided in codeSystem or                   |                      |
|                       | valueSet.  |                      |
| codeSystemName String | The common name of the coding system.                | Default:             |
| Public                | The code system name has no computational            |                      |
|                       | value. codeSystemName can never modify the           |                      |
|                       | meaning of codeSystem and cannot exist               |                      |
| [01]                  | without codeSystem.                                  |                      |
|                       | Note: The purpose of a code system name is to        |                      |
|                       | assist an unaided human interpreter of a code        |                      |
|                       | value to interpret codeSystem.                       |                      |
|                       | Information Processing Entities claiming direct      |                      |
|                       | or indirect conformance SHALL NOT                    |                      |
|                       | functionally rely on codeSystemName. In              |                      |
|                       | addition, they MAY choose not to implement           |                      |
|                       | codeSystemName but SHALL NOT reject                  |                      |
|                       | instances because codeSystemName is present.         |                      |

| Attribute                | Notes  | Constraints and tags |
|--------------------------|--|----------------------|
| codeSystemVersion String | If applicable, a version descriptor defined  | Default:             |
| Public                   | specifically for the given code system.  |                      |
|                          | Note: Different versions of one code system  |                      |
|                          | must be compatible. By definition a code   |                      |
| [01]                     | symbol SHALL have the same meaning   |                      |
|                          | throughout all versions of a code system.  |                      |
|                          | Between versions, codes may be retired but not   |                      |
|                          | withdrawn or reused. Where the definition of   |                      |
|                          | the meaning of a code symbol changes, it must  |                      |
|                          | still be compatible (equal) between different  |                      |
|                          | code system versions.  |                      |
|                          | Whenever a code system changes in an   |                      |
|                          | incompatible way, it will constitute a new code  |                      |
|                          | system, not simply a different version,  |                      |
|                          | regardless of how the vocabulary publisher   |                      |
|                          | calls it. For example, the publisher of ICD-9  |                      |
|                          | and ICD-10 calls these code systems, "revision   |                      |
|                          | 9" and "revision 10" respectively. However,  |                      |
|                          | ICD-10 is a complete redesign of the ICD code,   |                      |
|                          | not a backward compatible version. Therefore,  |                      |
|                          | for the purpose of this data type specification,   |                      |
|                          | ICD-9 and ICD-10 are different code systems,   |                      |
|                          | not just different versions. By contrast, when   |                      |
|                          | LOINC updates from revision "1.0j" to "1.0k",  |                      |
|                          | this would be considered as just another version   |                      |
|                          | of LOINC, since LOINC revisions are  |                      |
|                          | backwards compatible.  |                      |
| valueSet String          | Specifies the valueSet in which no code was  | Default:             |
| Public                   | found.   |                      |
|                          | Value sets shall be referred to by an identifier   |                      |
| [O 1]                    | name which allows unambiguous reference to a   |                      |
| [01]                     | value set. Where either ISO or HL7 have  |                      |
|                          | assigned an identifying name to a value set,   |                      |
|                          | then that name shall be used.  |                      |
|                          | In many cases, a CD is created from a value set  |                      |
|                          | - either a code/code system pair is chosen from<br>a valueSet, or one is not chosen and the CD has |                      |
|                          | the exceptional value of NullFlavor.OTH. If no   |                      |
|                          | code is chosen, it is generally inappropriate to   |                      |
|                          | reference the code system from which the code  |                      |
|                          | was chosen as the value set may not match the  |                      |
|                          | code system (may include a subset of the   |                      |
|                          | codeSystem, or additional terms from other   |                      |
|                          | code systems); instead, the value set should be  |                      |
|                          | provided. In addition, there are some known  |                      |
|                          | use cases where the value set that a user or   |                      |
|                          | system was offered when choosing a code  |                      |
|                          | affects the interpretation of the code.  |                      |
|                          | Note that if a code is provided, the meaning of  |                      |
|                          | the code must come from the definition of the  |                      |
|                          | code in the code system. The meaning of the  |                      |
|                          | code SHALL NOT depend on the value set.  |                      |
|                          | Information Processing Entities claiming direct  |                      |
|                          | or indirect conformance SHALL NOT be   |                      |

| .ttribute Notes                 |  | Constraints and tags |  |
|---------------------------------|--|----------------------|--|
|                                 | required to interpret the code in light of the valueSet, and they SHALL NOT reject an instance because of the presence or absence of any or a particular value set.  |                      |  |
| valueSetVersion String          | Specifies the version of the valueSet in which   | Default:             |  |
| Public                          | no code was found. valueSetVersion SHALL be provided when a  | 2 Guille             |  |
| [01]                            | valueSet is provided, and otherwise SHALL be null. The valueSet version specifies a date, with the resolution of a particular second, using the format defined for TS.DATETIME.FULL. The date is the date/time that the value set being used was published.  |                      |  |
| <b>displayName</b> ST<br>Public | A name or title for the code, under which the sending system shows the code value to its users.  | Default:             |  |
| [01]                            | If populated, the displayName SHALL be a valid human readable representation of the concept as defined by the code system at the time of data entry. The displayName SHALL conform to any rules defined by the codingSystem; if the codeSystem does not define a human representation for the code or expression, then none can be provided. displayName is included both as a courtesy to an unaided human interpreter of a code value and as a documentation of the name used to display the concept to the user. The display name has no functional meaning; it SHALL never exist without a code; and it SHALL never modify the meaning of the code. A display name may not be present if the code is an expression for which no display name has been assigned or can be derived. Information Processing Entities claiming direct or indirect conformance MAY choose not to implement displayName but SHALL NOT reject instances because displayName is present.  Note: Display names may not alter the meaning of the code value. Therefore, display names SHOULD NOT be presented to the user on a receiving application system without ascertaining that the display name adequately represents the concept referred to by the code value. Communication SHALL NOT simply rely on the display name. The display name's main purpose is to support implementation debugging. |                      |  |

| Public  The text as seen and/or selected by the user who entered the data.  Original text can be used in a structured user interface to capture what the user saw as a representation of the code on the data input screen, or in a situation where the user dictates or directly enters text, it is the text entered or uttered by the user.  It is valid to use the CD data type to store only the text that the user entered or uttered. In this situation, original text will exist without a code. In a situation where the code is assigned sometime after the text was entered, originalText is the text or phrase used as the basis for assigning the code.  Notes  The details of the link in the originalText.reference between different artifacts of medical information (e.g., document and coded result) is outside the scope of this specification and may be further proscribed in specifications that use this specification.  The original text SHALL be an excerpt of the relevant information in the original sources, rather than a pointer or exact reproduction.  Thus the original text SHALL be represented in plain text form. In specific circumstances, when clearly described the context of use, the originalText may be a reference to some other text artefact for which the resolution scope is clearly described.  Values of type CD MAY have a original text despite not having a code. Any CD value with no code signifies a coding exception. In this case, originalText is a name or description of the concept described in originalText. The originalText represents the originalText to the concept itself. Translations SHALL NOT have an originalText of their own.  Provides a reason why a particular CD has been originalText. |
|--|
| Set(CodingRationale) provided, either as the root concept or as one of the translations.  If populated, the values contained in this attribute SHALL be taken from the HL7   |

| Attribute           | Notes   | Constraints and tags |
|---------------------|---|----------------------|
| source CD           | A reference to the CD that was the source of        | Default:             |
| Public              | this translation, if this CD was created by         |                      |
|                     | translating it from another CD. This property is    |                      |
|                     | a reference, and if used, must be a reference to    |                      |
| [01]                | a CD within the same cluster of CDs that            |                      |
| . ,                 | represent the same concept. Specifically, the       |                      |
|                     | source SHALL be provided within the scope of        |                      |
|                     | this CD's root CD and translations.                 |                      |
|                     | A CD consists of a single root code and a set of    |                      |
|                     | translations, which do not have translations.       |                      |
|                     | Using the codingRationale property, a sender        |                      |
|                     | can indicate which is the original code. There      |                      |
|                     | are some circumstances in which it is useful to     |                      |
|                     | know which CD was translation from which            |                      |
|                     | CD. The source allows for the translation           |                      |
|                     | sequence from one translation to another to be      |                      |
|                     | represented. Each element of the translation set    |                      |
|                     | was translated from the original CD. Each           |                      |
|                     | translation may, however, also have further         |                      |
|                     | translations. Thus, when a code is translated       |                      |
|                     | multiple times the information about which          |                      |
|                     | code served as the input to which translation       |                      |
|                     | will be preserved.                                  |                      |
| translation Set(CD) | A set of other CDs that each represent a            | Default:             |
| Public              | translation of this CD into equivalent codes        |                      |
|                     | within the same code system or into                 |                      |
|                     | corresponding concepts from other code              |                      |
|                     | systems.  |                      |
|                     | NOTE: The translations are quasi-synonyms of        |                      |
|                     | one real-world concept. Every translation in the    |                      |
|                     | set is supposed to express the same meaning "in     |                      |
|                     | other words." However, exact synonymy rarely        |                      |
|                     | exists between two structurally different coding    |                      |
|                     | systems. For this reason, not all of the            |                      |
|                     | translations will be equally exact.                 |                      |
|                     | Translations SHALL NOT contain translations.        |                      |
|                     | The root CD has one set of translations which       |                      |
|                     | lists all the translations. The root translation is |                      |
|                     | generally the one that best meets the               |                      |
|                     | conformance criteria for the CD. No                 |                      |
|                     | implication about lineage of the translations       |                      |
|                     | can be drawn from the selection of the root         |                      |
|                     | code. Instead the properties codingRationale        |                      |
|                     | and source is used to trace lineage.                |                      |
|                     | In the absence of a constraining model that         |                      |
|                     | makes constraints on the value domain of the        |                      |
|                     | CD, any of the translations MAY be the root         |                      |
|                     | CD. If the constraining model makes                 |                      |
|                     | constraints on the value domain of the CD and       |                      |
|                     | there is a translation that meets the constraints,  |                      |
|                     | that translation SHOULD be the root CD. If the      |                      |
|                     | constraining model makes constraints on the         |                      |
|                     | value domain of the CD and there is no              |                      |
|                     | translation that meets the constraints, then any    |                      |

| Attribute | Notes  | Constraints and tags |
|-----------|--|----------------------|
|           | of the translations MAY be the root, as long as they are assigned a nullFlavor. An alternative is to put none of the translations in the root, and give it a nullFlavor of choice, and put all the translations in the translation property of the root. |                      |

## **Operations**

| Method                 | Notes   | Parameters    |
|------------------------|---|---------------|
| implies() BL<br>Public | True if this code/codeSystem is a specialization of the other code/codeSystem or has the same   | CD [in] other |
|                        | meaning. Note: in SNOMED, for example, two isomorphic forms of the same expression will imply each other. Note: A terminology service may be used to make this determination. |               |

## **EN.ON**

Type: <u>Class</u> <u>EN</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Identifiers Keywords:

*Detail: Created on 7/26/2006. Last modified on 6/16/2009. GUID:* {47FF99A7-062D-46d2-AF7E-D9A6A0CA9857}

Organization Name

## **Custom Properties**

• isActive = False

| Connector                     | Source | Target | Notes |
|-------------------------------|--------|--------|-------|
| <u>NoteLink</u>               | Public | Public |       |
|                               | EN.ON  | Note   |       |
| Generalization                | Public | Public |       |
| Source -> Destination         | EN.ON  | EN     |       |
|                               |        |        |       |
| <b>Realisation</b> implements | Public | Public |       |
| Source -> Destination         | EN.ON  | ON     |       |
|                               |        |        |       |

## **EN.PN**

Type: <u>Class</u> <u>EN</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Identifiers Keywords:

Detail: Created on 7/26/2006. Last modified on 6/16/2009. GUID: {F37562F7-9A00-44c5-B662-2A647E7E0EC4}

A restriction of EN used when the named Entity is a Person. A sequence of name parts, such as given name or family name, prefix, suffix, etc.

A name part is a restriction on entity name part that only allows those entity name parts qualifiers applicable to person names.

Note: Since the structure of entity name is mostly determined by the requirements of person name, the restriction is very minor.

## **Custom Properties**

• isActive = False

#### **Connections**

| Connector                     | Source | Target | Notes |
|-------------------------------|--------|--------|-------|
| <b>NoteLink</b>               | Public | Public |       |
|                               | EN.PN  | Note   |       |
|                               |        | - 11   |       |
| <b>Generalization</b>         | Public | Public |       |
| Source -> Destination         | EN.PN  | EN     |       |
|                               |        |        |       |
| <b>Realisation</b> implements | Public | Public |       |
| Source -> Destination         | EN.PN  | PN     |       |
|                               |        |        |       |

## **EN.TN**

Type: <u>Class</u> <u>EN</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Identifiers Keywords:

Detail: Created on 7/26/2006. Last modified on 6/16/2009. GUID: {AE5D8B14-2901-4d50-9777-3A3951185A54}

A restriction of EN that is effectively a simple string used for a simple name for things and places. Trivial names are typically used for places and things, such as Lake Erie or Washington-Reagan National Airport.

### **Custom Properties**

• isActive = False

| Connector       | Source | Target | Notes |
|-----------------|--------|--------|-------|
| <b>NoteLink</b> | Public | Public |       |

| Connector                     | Source | Target | Notes |
|-------------------------------|--------|--------|-------|
|                               | EN.TN  | Note   |       |
|                               |        |        |       |
| <b>Generalization</b>         | Public | Public |       |
| Source -> Destination         | EN.TN  | EN     |       |
|                               |        |        |       |
| <b>Realisation</b> implements | Public | Public |       |
| Source -> Destination         | EN.TN  | TN     |       |
|                               |        |        |       |

#### Ш

Type: <u>Class</u> <u>ANY</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Identifiers Keywords:

Detail: Created on 7/26/2006. Last modified on 6/16/2009. GUID: {50052448-D9F8-45c4-863E-9B9F679A1392}

An identifier that uniquely identifies a thing or object.

Examples are object identifier for HL7 RIM objects, medical record number, order id, service catalog item id, Vehicle Identification Number (VIN), etc. Instance identifiers are defined based on ISO object identifiers. An identifier allows someone to select one record, object or thing from a set of candidates. Usually an identifier alone without any context is not usable. Identifiers are distinguished from concept descriptors as concept descriptors never identify an individual thing, although there may sometimes be an individual record or object that represents the concept.

Information Processing Entities claiming direct or indirect conformance SHALL never assume that receiving applications can infer the identity of issuing authority or the type of the identifier from the identifier or components thereof.

#### **Custom Properties**

• isActive = False

#### **Connections**

| Connector             | Source | Target | Notes |  |
|-----------------------|--------|--------|-------|--|
| NoteLink              | Public | Public |       |  |
|                       | II     | Note   |       |  |
|                       |        |        |       |  |
| Realisation           | Public | Public |       |  |
| Source -> Destination | II     | II     |       |  |
|                       |        |        |       |  |
| Generalization        | Public | Public |       |  |
| Source -> Destination | II     | ANY    |       |  |
|                       |        |        |       |  |

| Attribute | Notes | Constraints and tags |
|-----------|-------|----------------------|
|-----------|-------|----------------------|

| Attribute                      | Notes  | Constraints and tags |
|--------------------------------|--|----------------------|
| root Uid                       | A unique identifier that guarantees the global                                 | Default:             |
| Public                         | uniqueness of the instance identifier.   |                      |
|                                | In the presence of a non-null extension, the root                              |                      |
|                                | is the unique identifier for the "namespace" of                                |                      |
| [01]                           | the identifier in the extension. Note that this                                |                      |
|                                | does NOT necessarily correlate with the  |                      |
|                                | organization that manages the issuing of the                                   |                      |
|                                | identifiers. A given organization may manage                                   |                      |
|                                | multiple identifier namespaces, and control                                    |                      |
|                                | over a given namespace may transfer from                                       |                      |
|                                | organization to organization over time while                                   |                      |
|                                | the root remains the same.   |                      |
|                                | This field can be either a DCE UUID, an  |                      |
|                                | Object Identifier (OID), or a special identifier                               |                      |
|                                | taken from lists that may be published by ISO                                  |                      |
|                                | or HL7.  |                      |
|                                | Notes:   |                      |
|                                | 1. Comparison of root values is always case                                    |                      |
|                                | sensitive. UUID's SHALL be represented in                                      |                      |
|                                | upper case, so UUID case should always be                                      |                      |
|                                | preserved.   |                      |
|                                | 2. The root should not be used to carry  |                      |
|                                | semantic meaning – all it does is ensure global                                |                      |
|                                | computational uniqueness   | D.C. Iv              |
| <b>extension</b> String Public | A character string as a unique identifier within                               | Default:             |
| Public                         | the scope of the identifier root. The root and extension scheme means that the |                      |
|                                | concatenation of root and extension SHALL be                                   |                      |
| [01]                           | a globally unique identifier for the item that                                 |                      |
| [01]                           | this II value identifies.  |                      |
|                                | Some identifier schemes define certain style                                   |                      |
|                                | options to their code values. For example, the                                 |                      |
|                                | U.S. Social Security Number (SSN) is normally                                  |                      |
|                                | written with dashes that group the digits into a                               |                      |
|                                | pattern "123-12-1234". However, the dashes                                     |                      |
|                                | are not meaningful and a SSN can also be                                       |                      |
|                                | represented as "123121234" without the   |                      |
|                                | dashes. In the case where identifier schemes                                   |                      |
|                                | provide for multiple representations, HL7 or                                   |                      |
|                                | ISO may make a ruling about which is the                                       |                      |
|                                | preferred form and document that ruling where                                  |                      |
|                                | that respective external identifier scheme is                                  |                      |
|                                | recognized.  |                      |
| displayable Boolean            | Specifies if the identifier is intended for human                              | Default:             |
| Public                         | display and data entry (displayable = true) as                                 |                      |
|                                | opposed to pure machine interoperation   |                      |
| 50.43                          | (displayable = false).   |                      |
| [01]                           | Information Processing Entities claiming direct                                |                      |
|                                | or indirect conformance MAY choose not to                                      |                      |
|                                | implement displayable but SHALL NOT reject                                     |                      |
|                                | instances because displayable is present.                                      |                      |

| Attribute                          | Notes   | Constraints and tags |
|------------------------------------|---|----------------------|
| identifierName String Public  [01] | This is a human-readable name for the namespace represented in the root.  Note: It is a descriptive name for the actual namespace. e.g. "California, U.S. Driver's License Number, 1970-".  IdentifierName does NOT refer to the organization which issued the identifier (e.g. California Dept. of Motor Vehicles). It is intended for use as a human readable label when an identifier must be displayed to a human user where an OID would not be meaningful.  Notes:  1. In general, it should only be used when an extension is present, allowing for a display such as "California, U.S. Driver's License Number, 1970-: 123456789". There are absolutely no guidelines for the contents of this text other than it should be completely descriptive of the namespace. E.g. "Driver's License" or even "California Driver's License" would not be ideal. However, formatting, capitalization, whitepace, language, etc. are completely up to the sender.  2. The Identifier Name has no computational value. Identifier Name has no computational value. Identifier Name is to assist an unaided human interpreter of an II value to interpret the authority. Applications SHALL NOT attempt to perform any decision-making, matching, filtering or other processing based on the presence or value of this property. It is for display and development assistance only. All decision logic MUST be based solely on the root and extension properties. Information Processing Entities claiming direct or indirect conformance MAY choose not to implement identifierName but SHALL NOT reject instances because identifierName is present. | Default:             |
| scope IdentifierScope<br>Public    | Specifies the scope in which the identifier applies to the object with which it is associated. If populated, the value of this attribute SHALL be taken from the HL7 IdentifierScope code   | Default:             |
| [01]                               | system  |                      |

| Attribute             | Notes   | Constraints and tags |
|-----------------------|---|----------------------|
| reliability           | Specifies the reliability with which this       | Default:             |
| IdentifierReliability | identifier is known. This attribute may be used |                      |
| Public                | to assist with identifier matching algorithms.  |                      |
|                       | If populated, the value of this attribute SHALL |                      |
|                       | be taken from the HL7 IdentifierReliability     |                      |
| [01]                  | code system.                                    |                      |
|                       |   |                      |
|                       |   |                      |

# Logicals

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: LocalDatatypes

Detail: Created on 6/16/2009. Last modified on 6/16/2009 GUID: {E8A41585-61B7-41a5-AE1D-CEB22C0F9DA5}

<u>Logicals</u> - (Logical diagram)

Created By: AbdulMalik Shakir on 6/16/2009

*Last Modified:* 6/16/2009

Version: 1.0. Locked: False

*GUID*: {E98356BA-3DEB-4469-BE3B-65E1716BE714}

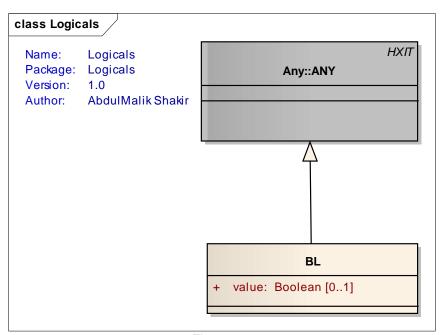


Figure: 54

BL

Type: <u>Class</u> <u>ANY</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Logicals Keywords:

Detail: Created on 7/26/2006. Last modified on 6/16/2009. GUID: {A21E8348-A3E7-4cf7-A87C-FB0F18D673D7}

BL stands for the values of two-valued logic. A BL value can be either true or false, or may have a nullFlavor.

# **Constraints**

• no value if null: (*Invariant, Status is Approved*) inv "no value if null": isNotNull implies value.oclUndefinedoclIsDefined

# **Custom Properties**

• isActive = False

#### **Connections**

| Connector             | Source     | Target | Notes |  |
|-----------------------|------------|--------|-------|--|
| Generalization        | Public     | Public |       |  |
| Source -> Destination | BL         | ANY    |       |  |
| NoteLink              | Public     | Public |       |  |
|                       | BL         | Note   |       |  |
| Generalization        | Public     | Public |       |  |
| Source -> Destination | BL.NONNULL | BL     |       |  |
| Realisation           | Public     | Public |       |  |
| Source -> Destination | BL         | BL     |       |  |

# **Attributes**

| Attribute                      | Notes                              | Constraints and tags |
|--------------------------------|------------------------------------|----------------------|
| <b>value</b> Boolean<br>Public | value of the BL if it is non Null. | Default:             |
| [01]                           |                                    |                      |
|                                |                                    |                      |

# **Operations**

| Method   | Notes  | Parameters    |
|----------|--|---------------|
| and() BL | True if both this and other are true values are    | BL [in] other |
| Public   | true. False if either value is false. Null         |               |
|          | otherwise.   |               |
|          |  |               |
| not() BL | False if this true, true if this is false. Null    |               |
| Public   | otherwiseTrue if this is false and true if this is |               |

| Method                 | Notes  | Parameters    |
|------------------------|--|---------------|
|                        | false. Note: TheseThis operations does conform to the general rules for operations and nullFlavorsdo not always confom to the general rules for nullFlavors and operations due to the special nature of these logical operations. For example. Null or True is true, because it does not matter whether the null value might actually be true or false, the result will be the same. Also note, from an implementers point of view, that these operations are strictly symmetric, and this may require some special case handling to prevent implementation errors when performing operations on null objects. |               |
| or() BL<br>Public      | True if either this and or other are true. False if both values are false. Null Otherwise  | BL [in] other |
| xor() BL<br>Public     | True if either this and other are true, but not both.different and not null. False if both this and other have the same value. Null otherwise.   | BL [in] other |
| implies() BL<br>Public | True if either this is false, or if this and other are true. False if this this is true and other is false. Null otherwise   | BL [in] other |

# **Quantities**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: LocalDatatypes

Detail: Created on 6/16/2009. Last modified on 6/16/2009 GUID: {9889CD43-7C8A-40ef-81AC-1DA0C41E8FF3}

 $\underline{\textbf{Quantities}} \text{ - } (Logical \ diagram)$ 

Created By: AbdulMalik Shakir on 6/16/2009

*Last Modified:* 6/16/2009

Version: 1.0. Locked: False

GUID: {ED48997D-82EA-4bb6-9B1D-5E51BF02C5E5}

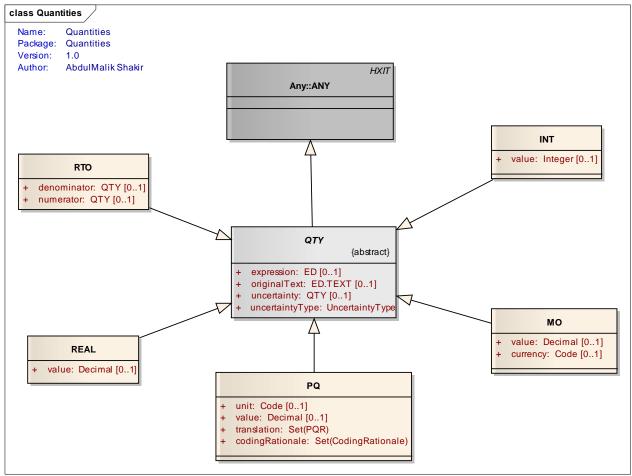


Figure: 55

# **INT**

Type: <u>Class</u> <u>OTY</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Quantities Keywords:

Detail: Created on 7/26/2006. Last modified on 6/16/2009. GUID: {F9CBEED5-6538-404a-9F92-F3546E4B16E2}

Integer numbers (-1,0,1,2, 100, 3398129, etc.) are precise numbers that are results of counting and enumerating. Integer numbers are discrete, the set of integers is infinite but countable. No arbitrary limit is imposed on the range of integer numbers.

## **Custom Properties**

• isActive = False

#### **Connections**

| Connector       | Source | Target | Notes |
|-----------------|--------|--------|-------|
| <u>NoteLink</u> | Public | Public |       |

| Connector             | Source     | Target | Notes |
|-----------------------|------------|--------|-------|
|                       | INT        | Note   |       |
|                       |            |        |       |
| <b>Generalization</b> | Public     | Public |       |
| Source -> Destination | INT.NONNEG | INT    |       |
|                       |            |        |       |
| Realisation           | Public     | Public |       |
| Source -> Destination | INT        | INT    |       |
|                       |            |        |       |
| <b>Generalization</b> | Public     | Public |       |
| Source -> Destination | INT        | QTY    |       |
|                       |            |        |       |

#### Attributes

| Attribute               | Notes   | Constraints and tags |
|-------------------------|---|----------------------|
| value Integer<br>Public | The value of the INT if not null. Note that this specification imposes no limitations on the size of integer, but most implementations will map | Default:             |
| [01]                    | this to a 32 or 64 bit integer.   |                      |
|                         |   |                      |

# **Operations**

| Method    | Notes  | Parameters     |
|-----------|--|----------------|
| +() INT   | The value of the addition of this and other.       | INT [in] other |
| Public    |  |                |
| -() INT   | The value of the subtraction of other from this.   | INT [in] other |
| Public    |  |                |
| -() INT   | The negative value of this.                        |                |
| Public    |  |                |
| *() INT   | The value of the multiplication of this and other  | INT [in] other |
| Public    |  |                |
| /() REAL  | The value of this divided by other. If other is 0, | INT [in] other |
| Public    | then the result is nullFlavor NI.                  |                |
| /() REAL  | The value of this divided by other. If other is 0, | REAL [in] x    |
| Public    | then the result is nullFlavor NI.                  |                |
| abs() INT | The absolute value of this.                        |                |
| Public    |  |                |
| div() INT | The number of times that other fits completely     | INT [in] other |
| Public    | within this  |                |
| mod() INT | The result is this modulo other                    | INT [in] other |
| Public    |  |                |
| max() INT | The maximum of this and other                      | INT [in] other |
| Public    |  |                |

| Method                  | Notes                                  | Parameters     |
|-------------------------|--|----------------|
| min() INT<br>Public     | The minimum of this and other          | INT [in] other |
| compares() BL<br>Public | Integer values may always be compared. | QTY [in] other |

#### MO

Type: <u>Class</u> <u>QTY</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Quantities Keywords:

Detail: Created on 7/26/2006. Last modified on 6/16/2009. GUID: {029872B8-87A7-4810-86D7-5681370F1137}

A MO is a quantity expressing the amount of money in some currency.

Currencies are the units in which monetary amounts are denominated in different economic regions. While the monetary amount is a single kind of quantity (money) the exchange rates between the different units are variable. This is the principle difference between PQ and MO, and the reason why currency units are not physical units.

# **Custom Properties**

• isActive = False

# **Connections**

| Connector             | Source | Target | Notes |  |
|-----------------------|--------|--------|-------|--|
| Generalization        | Public | Public |       |  |
| Source -> Destination | MO     | QTY    |       |  |
| Realisation           | Public | Public |       |  |
| Source -> Destination | MO     | MO     |       |  |
| NoteLink              | Public | Public |       |  |
| NOTELINIK             | MO     | Note   |       |  |
|                       |        |        |       |  |

#### <u>Attributes</u>

| Attribute               | Notes  | Constraints and tags |
|-------------------------|--|----------------------|
| value Decimal<br>Public | The value of the MO if non Null. MO values are usually precise to 0.01 (one cent, penny, | Default:             |
|                         | paisa, etc.) For large amounts, it is important not to store MO values in floating point |                      |
| [01]                    | registers, since this may lose precision.  |                      |
|                         |  |                      |

| Attribute               | Notes                                    | Constraints and tags |
|-------------------------|--|----------------------|
| currency Code<br>Public | The currency unit as defined in ISO 4217 | Default:             |
| [01]                    |  |                      |

#### **Operations**

| Method                  | Notes  | Parameters      |
|-------------------------|--|-----------------|
| +() MO<br>Public        | The value of the addition of this and other; if the currencies do not match, null (NullFlavor NI).     | MO [in] other   |
| -() MO<br>Public        | The value of the subtraction of other from this; if the currencies do not match, null (NullFlavor NI). | MO [in] other   |
| *() MO<br>Public        | The value of the multiplication of this by other   | REAL [in] other |
| /() MO<br>Public        | The value of this divided by other. If other is 0, then the result is nullFlavor NI.                   | REAL [in] other |
| max() MO<br>Public      | The maximum of this and other  | MO [in] other   |
| min() MO<br>Public      | The minimum of this and other  | MO [in] other   |
| compares() BL<br>Public | This and other can be compared if their currencies are the same.                                       | QTY [in] other  |

# PQ

Type: <u>Class</u> <u>OTY</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Quantities Keywords:

*Detail:* Created on 7/26/2006. Last modified on 6/16/2009. GUID: {C8497093-140E-4335-8ACE-4D18BFA4A87F}

A dimensioned quantity expressing the result of measuring

# **Custom Properties**

• isActive = False

**Connections** 

| Connector             | Source  | Target | Notes |
|-----------------------|---------|--------|-------|
| <u>NoteLink</u>       | Public  | Public |       |
|                       | PQ      | Note   |       |
| Realisation           | Public  | Public |       |
| Source -> Destination | PQ      | PQ     |       |
| Generalization        | Public  | Public |       |
| Source -> Destination | PQ.TIME | PQ     |       |
| Generalization        | Public  | Public |       |
| Source -> Destination | PQ      | QTY    |       |

| Attribute Attribute         | Notes   | Constraints and tags |
|-----------------------------|---|----------------------|
| unit Code Public [01]       | The unit of measure specified in the Unified Code for Units of Measure (UCUM).  UCUM defines two forms of expression, case sensitive and case insensitive. PQ uses the case sensitive codes. The codeSystem OID for the case sensitive form is 2.16.840.1.113883.6.8.  The default value for unit is the UCUM code "1" (unity).  Equality of physical quantities does not require                         | Default:             |
|                             | the values and units to be equal independently. Value and unit is only how we represent physical quantities. For example, 1 m equals 100 cm. Although the units are different and the values are different, the physical quantities are equal. Therefore one should never expect a particular unit for a physical quantity but instead allow for automated conversion between different comparable units. |                      |
| value Decimal Public [01]   | the number which is multiplied by the unit to make the PQ or PQR value if non Null.  Note This specification imposes no limitations on the size or precision of REAL, but most implementations will map this to a 8 ? 12 byte Real.   | Default:             |
| translation Set(PQR) Public | An alternative representation of the same physical quantity expressed in a different unit from a different unit code system and possibly with a different value.  | Default:             |

| Attribute   | Notes   | Constraints and tags |
|---|---|----------------------|
| codingRationale<br>Set(CodingRationale)<br>Public | The reason that this PQ or PQR was provided. More than one reason may be given. For possible values, see 7.5.1.4.10 CD.codingRationale. | Default:             |

# **Operations**

| Method                         | Notes   | Parameters      |
|--------------------------------|---|-----------------|
| canonical() PQ<br>Public       | The value converted to the form with canonical units. UCUM provides more information about canonical units                |                 |
| compares() BL<br>Public        | This and other can be compared if the units of the canonical forms are the same.  | QTY [in] other  |
| inverted() PQ<br>Public        | The inverted value of the PQ. Both value and unit must be inverted.   |                 |
| -() PQ<br>Public               | The negative value of this  |                 |
| +() PQ<br>Public               | The value of the addition of this and other; if the units do not match, null (NullFlavor NI).                             | PQ [in] other   |
| -() PQ<br>Public               | The value of the subtraction of other from this; if the units do not match, null (NullFlavor NI).                         | PQ [in] other   |
| *() PQ<br>Public               | The value of the multiplication of this and other with appropriate changes to the units.                                  | PQ [in] other   |
| *() PQ<br>Public               | The value of the multiplication of this and other   | REAL [in] other |
| /() PQ<br>Public               | The value of this divided by other with appropriate changes to the units. If other is 0, then the result is nullFlavor NI | PQ [in] other   |
| /() PQ<br>Public               | The value of this divided by other. If other is 0, then the result is nullFlavor NI.                                      | REAL [in] other |
| abs() PQ<br>Public             | The absolute value of this  |                 |
| max() PQ<br>Public             | The maximum of this and other; if the units do not match, null (NullFlavor NI).   | PQ [in] other   |
| min() PQ<br>Public             | The minimum of this and other; if the units do not match, null (NullFlavor NI).   | PQ [in] other   |
| toInterval() IVL(PQ)<br>Public | Converts this value to an interval that expresses the range covered by the precision of the value                         |                 |

#### **QTY**

Type: <u>Class</u> <u>ANY</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Quantities Keywords:

Detail: Created on 7/26/2006. Last modified on 6/16/2009. GUID: {BEA0F53E-A040-4184-835C-4EC4801C0439}

The quantity datatype is an abstract generalization for all datatypes whose domain values has an order relation (less-or-equal) and where difference is defined in all of the datatype's totally ordered value subsets.

The quantity type abstraction is needed in defining certain other types, such as the interval, and probability distributions.

#### **Custom Properties**

• isActive = False

#### **Connections**

| Connector             | Source | Target | Notes |  |
|-----------------------|--------|--------|-------|--|
| Generalization        | Public | Public |       |  |
| Source -> Destination | QTY    | ANY    |       |  |
| Generalization        | Public | Public |       |  |
| Source -> Destination | RTO    | QTY    |       |  |
| Generalization        | Public | Public |       |  |
| Source -> Destination | MO     | QTY    |       |  |
| <u>NoteLink</u>       | Public | Public |       |  |
|                       | Note   | QTY    |       |  |
| Generalization        | Public | Public |       |  |
| Source -> Destination | REAL   | QTY    |       |  |
| Generalization        | Public | Public |       |  |
| Source -> Destination | TS     | QTY    |       |  |
| <u>Dependency</u>     | Public | Public |       |  |
| Source -> Destination | QTY    | PPD    |       |  |
| Generalization        | Public | Public |       |  |
| Source -> Destination | URG    | QTY    |       |  |
| Generalization        | Public | Public |       |  |
| Source -> Destination | СО     | QTY    |       |  |
| Generalization        | Public | Public |       |  |
| Source -> Destination | PQ     | QTY    |       |  |
| Generalization        | Public | Public |       |  |

| Connector             | Source | Target | Notes |  |
|-----------------------|--------|--------|-------|--|
| Source -> Destination | INT    | QTY    |       |  |
| Realisation           | Public | Public |       |  |
| Source -> Destination | QTY    | QTY    |       |  |
| Realisation           | Public | Public |       |  |
| Source -> Destination | QTY    | EXPR   |       |  |

| Attribute               | Notes   | Constraints and tags |
|-------------------------|---|----------------------|
| expression ED<br>Public | An expression that can be used to derive the actual value of the quantity given information taken from the context of use.  For example expression can be used for  | Default:             |
| [01]                    | expressing dosage instructions that depend on patient body weight. Note: If no proper value is provided for the QTY, then the value SHALL have a nullFlavor, whether or not an expression is provided.  The language of the expression is inferred from the mediatype. If multiple translations are provided in the expression, the evaluator is free to choose whichever language is preferred; all translations SHALL specify the same outcome. The language defines the forms that the expression property can take, how the information available in the context of the expression is made available within the features of the language, and how the language declares the new form of the value. Languages may only be used if this information has been appropriately defined for the context in which the QTY is used.  Information Processing Entities are not required to implement any languages in order to claim direct or indirect conformance to this specification, but SHOULD declare what languages are supported in their conformance statements.  Language Mediatype  OCL text/plain+ocl  Factor application/h17-factor+xml  MathML application/mathml+xml  Note: Factor is an HL7 specific language documented in the Abstract Datatypes  Specification. |                      |

| Attribute                              | Notes   | Constraints and tags |
|--|---|----------------------|
| originalText ED.TEXT Public  [01]      | The text representation from which the QTY was encoded, if such a representation is the source of the QTY.  Original text can be used in a structured user interface to capture what the user saw as a representation of the quantity on the data input screen, or in a situation where the user dictates or directly enters text, it is the text entered or uttered by the user.  It is valid to use a QTY derived data type to store only the text that the user entered or uttered. In this situation, original text will exist without a valid value. In a situation where the value is determined sometime after the text was entered, originalText is the text or phrase used as the basis for determining the value. The originalText is not a substitute for a valid value. If the actual value of the QTY is not valid, then the QTY SHALL be null, irrespective of whether originalText has a value or not. | Default:             |
| uncertainty QTY Public  [01]           | Specifies the uncertainty of the quantity using a distribution function and its parameters. It is the primary measure of variance/uncertainty of the value (the square root of the sum of the squares of the differences between all data points and the mean). The actual type of uncertainty depends on the type of the QTY. Note: uncertainty SHALL only be applied to value domains that have a continuous distribution (REAL, PQ, MO, and TS). Uncertainty MAY be applied to the numerator and denominator of a RTO separately. Uncertainty SHALL not have an expression. Uncertainty SHALL not have uncertainty of it's own. Uncertainty SHALL not have originalText.   | Default:             |
| uncertaintyType UncertaintyType Public | A code specifying the type of probability distribution in uncertainty.  The NULL value (unknown) for the type code indicates that the probability distribution type is unknown. In that case, uncertainty has the meaning of an informal guess if it is populated. If populated, the value of this attribute SHALL be taken from the HL7 DistributionType code system.  | Default:             |

#### **Operations**

| Method           | Notes  | Parameters     |
|------------------|--|----------------|
| <() BL<br>Public | True if the value of this is less than the value of other. | QTY [in] other |
| rublic           | oner.  |                |
| <=() BL          | True if the value of this is less than or equal to         | QTY [in] other |

|         | the value of other.  |                |
|---------|--|----------------|
|         |  |                |
| >=() BL | True if the value of this is greater than or equal   | QTY [in] other |
| Public  | to the value of other.   |                |
| >() BL  | True if the value of this is greater than the  | QTY [in] other |
| Public  | value of other.  |                |
|         | The result of subtraction of other from this.  | QTY [in] other |
|         | Other must be of the type of value (same type  |                |
|         | as this, except for TS, where the value must be  |                |
|         | a TS or a PQ with units of time, or for PQ,  |                |
|         | where the value of other must have compatible units), else the result is null (nullFlavor NI). |                |
|         | units), else the result is hun (hum lavoi 141).  |                |
| +() QTY | The result of addition of this and other. Other  | QTY [in] other |
|         | must be of the right type of value (same type as   |                |
|         | this, except for TS, where the value must be a   |                |
|         | PQ with units of time, or for PQ, where the  |                |
|         | value of other must have compatible units), else the result is null (nullFlavor NI).           |                |
|         | the result is hull (hull lavoi 141).   |                |
|         | whether this and other can be compared using   | QTY [in] other |
|         | equality.  |                |
|         | Note: Generally this is true if both this and  |                |
|         | other are the same type unless noted otherwise   |                |
|         | for specializations for QTY.   |                |
|         | True if other is an instance that expresses the  | QTY [in] other |
|         | difference between two instances of this type.   |                |
|         | Note: Usually this is true if other the same as  |                |
|         | the type, except for TS, where the difference is   |                |
|         | expressed as a PQ with a unit that is a kind of  |                |
|         | time, and for PQ, where the units must be compatible.  |                |
|         | companiore.  |                |

# **REAL**

Type: <u>Class</u> <u>QTY</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Quantities Keywords:

Detail: Created on 7/26/2006. Last modified on 6/16/2009. GUID: {46BF2B32-220A-419e-A92A-5CAB6812281B}

Fractional numbers. Typically used whenever quantities are measured, estimated, or computed from other real numbers. The typical representation is decimal, where the number of significant decimal digits is known as the precision.

#### **Custom Properties**

• isActive = False

**Connections** 

| Connector             | Source | Target | Notes |  |
|-----------------------|--------|--------|-------|--|
| NoteLink              | Public | Public |       |  |
|                       | REAL   | Note   |       |  |
|                       |        |        |       |  |
| <b>Generalization</b> | Public | Public |       |  |
| Source -> Destination | REAL   | QTY    |       |  |
|                       |        |        |       |  |
| <b>Realisation</b>    | Public | Public |       |  |
| Source -> Destination | REAL   | REAL   |       |  |
|                       |        |        |       |  |

**Attributes** 

| Attribute     | Notes   | Constraints and tags |
|---------------|---|----------------------|
| value Decimal | The value of the REAL if non Null.              | Default:             |
| Public        | Real is the UML Kernel Real type.               |                      |
|               | Note: This specification imposes no limitations |                      |
|               | on the size or precision of REAL, but most      |                      |
| [01]          | implementations will map this to a 8 to 12 byte |                      |
|               | Real.   |                      |
|               |   |                      |
|               |   |                      |

**Operations** 

| Operations           |  |                        |  |  |
|----------------------|--|------------------------|--|--|
| Method               | Notes  | Parameters             |  |  |
| +() REAL             | The value of the addition of this and other.       | <b>REAL</b> [in] other |  |  |
| Public               |  |                        |  |  |
|                      |  |                        |  |  |
| -() REAL             | The value of the subtraction of other from this    | <b>REAL</b> [in] other |  |  |
| Public               |  |                        |  |  |
| *() REAL             | The value of the multiplication of this and        | REAL [in] other        |  |  |
| Public               | other.   |                        |  |  |
|                      |  |                        |  |  |
| /() REAL             | The value of this divided by other. If other is 0, | REAL [in] other        |  |  |
| Public               | then the result is nullFlavor NI.                  |                        |  |  |
|                      |  |                        |  |  |
| -() REAL             | The negative value of this                         |                        |  |  |
| Public               |  |                        |  |  |
| max() REAL           | The maximum of this and other.                     | REAL [in] other        |  |  |
| Public               |  |                        |  |  |
|                      | The minimum of delegand and an                     | DEAL Caladas           |  |  |
| min() REAL<br>Public | The minimum of this and other                      | REAL [in] other        |  |  |
| Public               |  |                        |  |  |
| abs() REAL           | The absolute value of this.                        |                        |  |  |
| Public               |  |                        |  |  |
| floor() INT          | The largest integer which is less than or equal    |                        |  |  |
| Public               | to this  |                        |  |  |
|                      |  |                        |  |  |
| ceiling() INT        | The smallest integer which is greater than or      |                        |  |  |

| Method                           | Notes  | Parameters      |
|----------------------------------|--|-----------------|
| Public                           | equal to this  |                 |
| round() INT<br>Public            | The integer which is closest to this. When there are two such integers, the largest one. |                 |
| inverted() REAL Public           | The value of 1 divided by self   |                 |
| power() REAL<br>Public           | this raised to the power of other  | REAL [in] other |
| toInterval() IVL(REAL)<br>Public | Converts this value to an interval that expresses the range covered by the precision.    |                 |
| compares() BL<br>Public          | Real numbers may always be compared  | QTY [in] other  |

#### **RTO**

Type: <u>Class</u> <u>OTY</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Quantities Keywords:

Detail: Created on 7/26/2006. Last modified on 6/16/2009. GUID: {0E49FC83-D7AB-419c-A3C4-90B65627F52D}

A quantity constructed as the quotient of a numerator quantity divided by a denominator quantity.

Common factors in the numerator and denominator are not automatically cancelled out.

The RTO datatype supports titers (e.g., "1:128") and other quantities produced by laboratories that truly represent ratios. Ratios are not simply "structured numerics", particularly blood pressure measurements (e.g. "120/60") are not ratios.

#### Notes:

- 1. Ratios are different from rational numbers, i.e., in ratios common factors in the numerator and denominator never cancel out. A ratio of two real or integer numbers is not automatically reduced to a real number. This datatype is not defined to generally represent rational numbers. It is used only if common factors in numerator and denominator are not supposed to cancel out. This is only rarely the case. For observation values, ratios occur almost exclusively with titers. In most other cases, REAL should be used instead of the RTO.
- 2. Since many implementation technologies expect generics to be collections, or only have one parameter, RTO is not implemented as a generic in this specification. Constraints at the point where the RTO is used will define which form of OTY are used.

#### **Custom Properties**

• isActive = False

#### **Connections**

| Connector                            | Source        | Target        | Notes |
|--------------------------------------|---------------|---------------|-------|
| Generalization Source -> Destination | Public<br>RTO | Public<br>QTY |       |
| Realisation Source -> Destination    | Public<br>RTO | Public<br>RTO |       |

| Connector       | Source        | Target         | Notes |
|-----------------|---------------|----------------|-------|
|                 |               |                |       |
| <u>NoteLink</u> | Public<br>RTO | Public<br>Note |       |

#### Attributes

| Attribute       | Notes   | Constraints and tags |
|-----------------|---|----------------------|
| denominator QTY | The quantity that divides the numerator in the  | Default:             |
| Public          | ratio.  |                      |
|                 | The denominator SHALL not be zero.              |                      |
| ro 11           |   |                      |
| [01]            |   |                      |
|                 |   |                      |
|                 |   |                      |
| numerator QTY   | The quantity that is being divided in the ratio | Default:             |
| Public          | The quantity that is being divided in the ratio | Dejami.              |
|                 |   |                      |
|                 |   |                      |
| [01]            |   |                      |
|                 |   |                      |
|                 |   |                      |
|                 |   |                      |

# **Operations**

| Method        | Notes   | Parameters     |
|---------------|---|----------------|
| compares() BL | This and other can be be compared if both the | QTY [in] other |
| Public        | numerator and denominator can be compared     |                |
|               |   |                |

# **Strings**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: LocalDatatypes

Detail: Created on 6/16/2009. Last modified on 6/16/2009 GUID: {F4A03239-B0F8-4cb7-AFCF-5EA95C17FA41}

 $\underline{\textbf{Strings}} \text{ - } (Logical \ diagram)$ 

Created By: AbdulMalik Shakir on 6/16/2009

*Last Modified:* 6/16/2009

Version: 1.0. Locked: False

*GUID*: {85B11C36-3628-4d95-BD55-C6F16801719C}

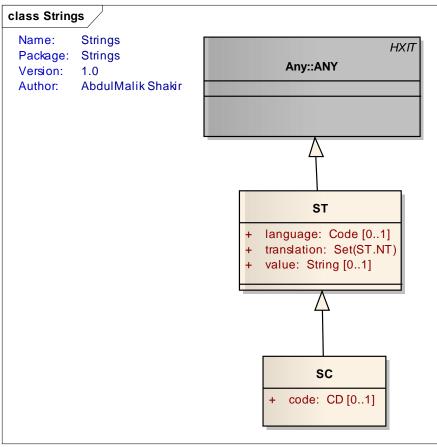


Figure: 56

#### SC

Type: <u>Class</u> <u>ST</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Strings Keywords:

Detail: Created on 7/26/2006. Last modified on 6/16/2009. GUID: {8D0F0EA0-3890-4976-9F2F-1FCB75B7EAEA}

A character string that optionally may have a code attached. The text must always be present if a code is present.

Note: The code is often a local code. SC is used in cases where coding is exceptional (e.g., user error messages are essentially text messages, and the text message is the important content. However sometimes messages come from a catalog of prepared messages, which SC allows to reference).

Any non-null SC value MAY have a code, however, a code SHALL NOT be given without the text.

#### **Custom Properties**

• isActive = False

#### **Connections**

| Connector             | Source | Target | Notes |
|-----------------------|--------|--------|-------|
| <u>NoteLink</u>       | Public | Public |       |
|                       | SC     | Note   |       |
| G 11 41               | D 111  | D 111  |       |
| <b>Generalization</b> | Public | Public |       |
| Source -> Destination | SC.NT  | SC     |       |
|                       |        |        |       |
| <b>Generalization</b> | Public | Public |       |
| Source -> Destination | SC     | ST     |       |
|                       |        |        |       |
| Realisation           | Public | Public |       |
| Source -> Destination | SC     | SC     |       |
|                       |        |        |       |

#### Attributes

| Attribute | Notes  | Constraints and tags |
|-----------|--|----------------------|
| code CD   | The coded value associated with the string. If | Default:             |
| Public    | the value is null, there is no coded value     |                      |
|           | associated with this string.                   |                      |
|           |  |                      |
| [01]      |  |                      |
|           |  |                      |
|           |  |                      |
|           |  |                      |

# ST

Type: <u>Class</u> <u>ANY</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Strings Keywords:

Detail: Created on 7/26/2006. Last modified on 6/16/2009. GUID: {C5CC1517-8BCC-425f-A885-30B3B97344D6}

The character string datatype stands for text data, primarily intended for machine processing (e.g., sorting, querying, indexing, etc.). Used for names, symbols, and formal expressions.

A ST SHALL have at least one character or else be NULL.

# **Custom Properties**

• isActive = False

#### **Connections**

| Connections           |        |        |       |  |
|-----------------------|--------|--------|-------|--|
| Connector             | Source | Target | Notes |  |
| <b>NoteLink</b>       | Public | Public |       |  |
|                       | ST     | Note   |       |  |
|                       |        |        |       |  |
| Generalization        | Public | Public |       |  |
| Source -> Destination | ST     | ANY    |       |  |
|                       |        |        |       |  |
| Generalization        | Public | Public |       |  |

| Connector             | Source | Target | Notes |  |
|-----------------------|--------|--------|-------|--|
| Source -> Destination | ST.NT  | ST     |       |  |
| Realisation           | Public | Public |       |  |
| Source -> Destination | ST     | ST     |       |  |
| Generalization        | Public | Public |       |  |
| Source -> Destination | SC     | ST     |       |  |

Attributes

| Attribute Attribute           | Notes   | Constraints and tags |
|-------------------------------|---|----------------------|
| language Code<br>Public       | The human language of the content. Valid codes are taken from the IETF RFC 3066. If this attribute is null, the language may be inferred from elsewhere, either from the  | Default:             |
| [01]                          | context or from unicode language tags, for example.  Note: While Language tags usually alter the meaning of the text, the language does not alter the meaning of the characters in the text.  |                      |
| translation Set(ST.NT) Public | Alternate renditions of the same content translated into a different language. Translations may not contain translations. The translations SHALL convey the same information, but in a different language. The translations do not take part in the test for equality, so SHALL NOT introduce any new semantics to the value. | Default:             |
| value String Public  [01]     | The actual content of the string. Refer to section 6.7.4 for discussion on String character encodings   | Default:             |

# **Operations**

| Method             | Notes | Parameters     |
|--------------------|-------|----------------|
| mediaType() String |       |                |
| Public             |       |                |
| size() INT         |       |                |
| Public             |       |                |
| concat() ST        |       | ST [in] other  |
| Public             |       |                |
|                    |       |                |
| substring() ST     |       | INT [in] upper |
| Public             |       |                |
|                    |       | INT [in] lower |
|                    |       |                |
|                    |       |                |
| toInteger() INT    |       |                |

| Method           | Notes | Parameters |
|------------------|-------|------------|
| Public           |       |            |
| toReal() REAL    |       |            |
| Public           |       |            |
| toTimestamp() TS |       |            |
| Public           |       |            |

# **TimingExpressions**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: LocalDatatypes

Detail: Created on 6/16/2009. Last modified on 6/16/2009 GUID: {58C8DC63-B121-4bd4-AE87-D44750F32BA4}

 $\underline{\textbf{TimingExpressions}} \cdot (Logical\ diagram)$ 

Created By: AbdulMalik Shakir on 6/16/2009

*Last Modified:* 6/16/2009

Version: 1.0. Locked: False

*GUID*: {483C0CF9-A8A6-473f-A285-7BEA707B77FB}

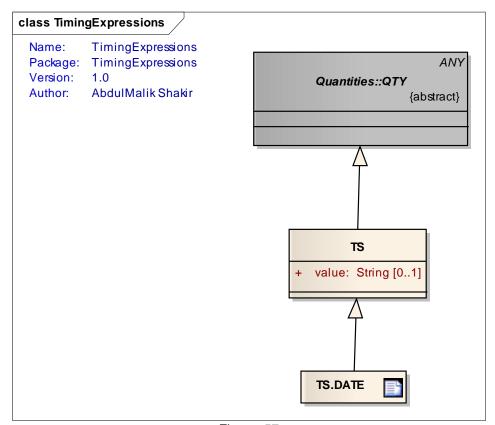


Figure: 57

# TS

Type: <u>Class</u> <u>QTY</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: TimingExpressions Keywords:

Detail: Created on 7/26/2006. Last modified on 6/16/2009. GUID: {2D510014-9EB2-42ec-A6DA-5B5763E85D11}

A quantity specifying a point on the axis of natural time. A point in time is most often represented as a calendar expression.

# **Custom Properties**

• isActive = False

## **Connections**

| Connector             | Source      | Target | Notes |  |
|-----------------------|-------------|--------|-------|--|
| NoteLink              | Public      | Public |       |  |
|                       | TS          | Note   |       |  |
| Generalization        | Public      | Public |       |  |
| Source -> Destination | TS.DATE     | TS     |       |  |
| Generalization        | Public      | Public |       |  |
| Source -> Destination | TS.DATETIME | TS     |       |  |
| Realisation           | Public      | Public |       |  |
| Source -> Destination | TS          | TS     |       |  |
| Generalization        | Public      | Public |       |  |
| Source -> Destination | TS          | QTY    |       |  |

#### Attributes

| Attribute    | Notes   | Constraints and tags |
|--------------|---|----------------------|
| value String | The value of the TS if non Null. value is a   | Default:             |
| Public [01]  | string with the format "YYYYMMDDHHMMSS.UUUU[+ -ZZzz]" that conforms to the constrained ISO 8601 that is defined in ISO 8824 (ASN.1) under clause 32 (generalized time). The format should be used to the degree of precision that is appropriate. |                      |

# **Operations**

| O p C · C · C · C · C · C · C · C · C · C |  |           |
|---|--|-----------|
| Method                                    | Notes Para   | meters    |
| +() TS                                    | The value of the addition of this and other; if <b>PQ</b> [1]  | in] other |
| Public                                    | other.units are not a time, null (NullFlavor NI).              |           |
|   |  |           |
| -() TS                                    | The value of the subtraction of other from this; <b>PQ</b> [1] | in] other |
| Public                                    | if other.units are not a time, null (NullFlavor                | _         |

| Method                         | Notes   | Parameters    |
|--------------------------------|---|---------------|
|                                | NI).  |               |
| -() PQ                         | The value of the subtraction of other from this;                                      | TS [in] other |
| Public                         | the return value will have units that are a time.                                     |               |
| max() TS<br>Public             | The maximum of this and other.  | TS [in] other |
| min() TS<br>Public             | The minimum of this and other.  | TS [in] other |
| toInterval() IVL(TS)<br>Public | Converts this value to an interval that expresses the range covered by the precision. |               |

# **TS.DATE**

Type: <u>Class</u> <u>TS</u>

Status: Proposed. Version 1.0. Phase 1.0. Package: TimingExpressions Keywords:

Detail: Created on 6/26/2007. Last modified on 6/16/2009. GUID: {7E0DAA40-5CF2-44a8-85F5-331EF2BC76EC}

# **Custom Properties**

• isActive = False

#### **Connections**

| Connector             | Source       | Target  | Notes |
|-----------------------|--------------|---------|-------|
| <u>NoteLink</u>       | Public       | Public  |       |
|                       | TS.DATE      | Note    |       |
|                       |              |         |       |
| <b>Generalization</b> | Public       | Public  |       |
| Source -> Destination | TS.DATE.FULL | TS.DATE |       |
|                       |              |         |       |
| <b>Realisation</b>    | Public       | Public  |       |
| Source -> Destination | TS.DATE      | TS.DATE |       |
|                       |              |         |       |
| Generalization        | Public       | Public  |       |
| Source -> Destination | TS.DATE      | TS      |       |
|                       |              |         |       |

# **Enumerations**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: EMS DAM Static Information Model

Detail: Created on 6/30/2009. Last modified on 8/12/2009 GUID: {EDE77EE9-B1B4-4efc-B1F9-0121F0AECBEF}

 $\underline{\textbf{Enumerations}} \textbf{-} (Logical \ diagram)$ 

Created By: AbdulMalik Shakir on 6/30/2009

*Last Modified:* 8/25/2009

Version: 1.0. Locked: False

*GUID*: {41732B71-C825-4903-9514-AE4BFD4E0E7E}

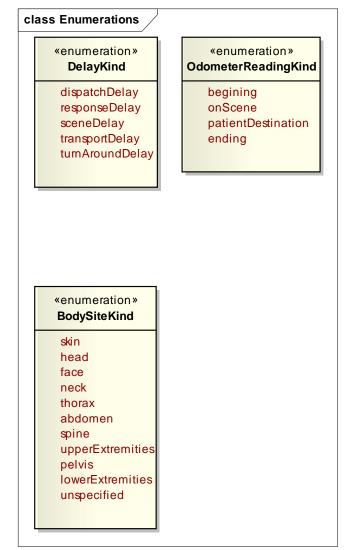


Figure: 58

# **BodySiteKind**

*Type:* Enumeration

Status: Proposed. Version 1.0. Phase 1.0. Package: Enumerations Keywords:

Detail: Created on 8/25/2009. Last modified on 8/25/2009.

# *GUID*: {98D5995C-6E7A-4905-B06F-142C1EA8AEC7}

# **Custom Properties**

• isActive = False

| Aurionies  |       |                      |
|--|-------|----------------------|
| Attribute  | Notes | Constraints and tags |
| skin   |       | Default:             |
| Public   |       | ,                    |
| 1 done   |       |                      |
|  |       |                      |
|  |       |                      |
|  |       |                      |
| «enum»   |       |                      |
| «Chum»   |       |                      |
|  |       |                      |
|  |       |                      |
| head   |       | Default:             |
| Deblic   |       | Dejann.              |
| Public   |       |                      |
|  |       |                      |
|  |       |                      |
|  |       |                      |
| «enum»   |       |                      |
| «chum»   |       |                      |
|  |       |                      |
|  |       |                      |
| face   |       | Default:             |
| Public   |       | Bejann.              |
| Public   |       |                      |
|  |       |                      |
|  |       |                      |
|  |       |                      |
| «enum»   |       |                      |
| «Chum"   |       |                      |
|  |       |                      |
|  |       |                      |
| neck   |       | Default:             |
| Public   |       | Bejuni.              |
| rubiic   |       |                      |
|  |       |                      |
|  |       |                      |
|  |       |                      |
| «enum»   |       |                      |
| well all the second sec |       |                      |
|  |       |                      |
|  |       |                      |
| thorax   |       | Default:             |
| Public   |       | ,                    |
| 1 done   |       |                      |
|  |       |                      |
|  |       |                      |
|  |       |                      |
| «enum»   |       |                      |
|  |       |                      |
|  |       |                      |
|  |       |                      |

| Attribute               | Notes | Constraints and tags |
|-------------------------|-------|----------------------|
| abdomen<br>Public       |       | Default:             |
| T done                  |       |                      |
|                         |       |                      |
| «enum»                  |       |                      |
|                         |       |                      |
| spine<br>Public         |       | Default:             |
|                         |       |                      |
|                         |       |                      |
| «enum»                  |       |                      |
|                         |       | D.C. L               |
| upperExtremities Public |       | Default:             |
|                         |       |                      |
| «enum»                  |       |                      |
| welland.                |       |                      |
| pelvis                  |       | Default:             |
| Public                  |       |                      |
|                         |       |                      |
| «enum»                  |       |                      |
|                         |       |                      |
| lowerExtremities        |       | Default:             |
| Public                  |       |                      |
|                         |       |                      |
| «enum»                  |       |                      |
|                         |       |                      |
| unspecified<br>Public   |       | Default:             |
|                         |       |                      |
|                         |       |                      |
| «enum»                  |       |                      |
|                         |       |                      |

# DelayKind

Type: Enumeration

Status: Proposed. Version 1.0. Phase 1.0.

Package: Enumerations Keywords:

Detail: Created on 6/29/2009. Last modified on 6/30/2009. GUID: {3D3E70E3-64FB-4ba0-9130-EF52FFA312A4}

# **Custom Properties**

• isActive = False

| Attribute Attribute             | Notes | Constraints and tags |
|---------------------------------|-------|----------------------|
| dispatchDelay<br>Public         |       | Default:             |
| «enum»                          |       |                      |
| responseDelay<br>Public         |       | Default:             |
| «enum»                          |       |                      |
| sceneDelay<br>Public            |       | Default:             |
| «enum»                          |       |                      |
| <b>transportDelay</b><br>Public |       | Default:             |
| «enum»                          |       |                      |

| Attribute                 | Notes | Constraints and tags |
|---------------------------|-------|----------------------|
| turnAroundDelay<br>Public |       | Default:             |
| «enum»                    |       |                      |

# **OdometerReadingKind**

*Type:* Enumeration

Status: Proposed. Version 1.0. Phase 1.0.

Package: Enumerations Keywords:

Detail: Created on 6/29/2009. Last modified on 6/30/2009. GUID: {6F5227D0-57D4-4276-8616-48392B4F1A1A}

# **Custom Properties**

• isActive = False

| Attribute          | Notes | Constraints and tags |
|--------------------|-------|----------------------|
| begining           |       | Default:             |
| Public             |       |                      |
|                    |       |                      |
|                    |       |                      |
| «enum»             |       |                      |
|                    |       |                      |
| onScene            |       | Default:             |
| Public             |       |                      |
|                    |       |                      |
|                    |       |                      |
| «enum»             |       |                      |
|                    |       |                      |
| patientDestination |       | Default:             |
| Public             |       |                      |
|                    |       |                      |
| //Anumy            |       |                      |
| «enum»             |       |                      |
|                    |       |                      |

| Attribute        | Notes | Constraints and tags |
|------------------|-------|----------------------|
| ending<br>Public |       | Default:             |
| «enum»           |       |                      |

# ResponseOccuranceKind

*Type:* Enumeration

Status: Proposed. Version 1.0. Phase 1.0.

Package: Enumerations Keywords:

Detail: Created on 7/14/2009. Last modified on 7/14/2009. GUID: {EAFDB000-2B43-41cf-9AB2-6F7DEA9582BC}

# **Custom Properties**

• isActive = False

| Default: |
|----------|
|          |
|          |
|          |
|          |
|          |
| D - C I. |
| Default: |
|          |
|          |
|          |
|          |
|          |
| Default: |
|          |
|          |
|          |
|          |
|          |
|          |

| Attribute                       | Notes | Constraints and tags |
|---------------------------------|-------|----------------------|
| dispatchUnitNotification Public |       | Default:             |
| «enum»                          |       |                      |
| unitEnRoute<br>Public           |       | Default:             |
| «enum»                          |       |                      |
| unitOnSceneArrival<br>Public    |       | Default:             |
| «enum»                          |       |                      |
| unitAtPatientArrival Public     |       | Default:             |
| «enum»                          |       |                      |
| patientCareTransfer Public      |       | Default:             |
| «enum»                          |       |                      |
| unitDepartScene<br>Public       |       | Default:             |
| «enum»                          |       |                      |

| Attribute                   | Notes | Constraints and tags |
|-----------------------------|-------|----------------------|
| patientDestinationArrival   |       | Default:             |
| Public                      |       |                      |
|                             |       |                      |
|                             |       |                      |
| «enum»                      |       |                      |
|                             |       |                      |
| LID LT G                    |       |                      |
| unitBackInService<br>Public |       | Default:             |
| rubiic                      |       |                      |
|                             |       |                      |
|                             |       |                      |
| «enum»                      |       |                      |
|                             |       |                      |
| unitCancelled               |       | Default:             |
| Public                      |       | J                    |
|                             |       |                      |
|                             |       |                      |
| «enum»                      |       |                      |
|                             |       |                      |
|                             |       |                      |
| unitBackHome                |       | Default:             |
| Public                      |       |                      |
|                             |       |                      |
|                             |       |                      |
| «enum»                      |       |                      |
|                             |       |                      |
|                             |       |                      |

# **Information Model Sand Box**

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: EMS Domain Analysis Model

Detail: Created on 4/23/2009. Last modified on 8/12/2009 GUID: {A4274CB3-97A7-431d-9EE1-3C86BB1361B8}

<u>Information Model Sand Box</u> - (*Package diagram*) <u>Created By:</u> Salimah Shakir *on* 8/12/2009

*Last Modified:* 8/26/2009

Version: 1.0. Locked: False

version. 1.0. Locked. Talse

*GUID*: {346EB794-734B-4975-9CAB-A00C71AF566D}

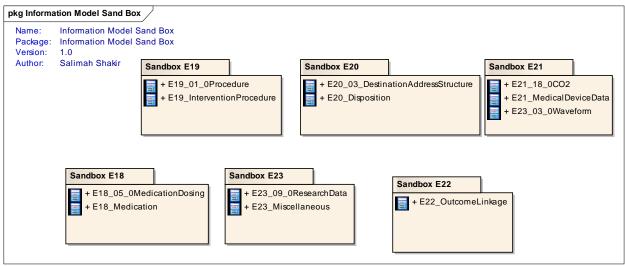


Figure: 59

# Sandbox E18

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Information Model Sand Box

Detail: Created on 8/12/2009. Last modified on 8/13/2009 GUID: {67A8F7BE-022D-4341-B0C7-8EDE16908F0F}

# E18\_InterventionMedication - (Logical diagram) Created By: AbdulMalik Shakir on 8/12/2009

*Last Modified:* 8/13/2009

Version: 1.0. Locked: False

GUID: {E128F43C-17C4-4a8d-84AA-747DCADB3C66}

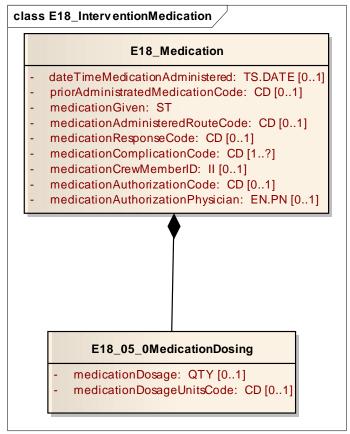


Figure: 60

# E18\_05\_0MedicationDosing

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: Sandbox E18 Keywords:

Detail: Created on 8/12/2009. Last modified on 8/12/2009. GUID: {87B65F57-C1F1-45af-AABA-BEE1110A3668}

#### **Custom Properties**

• isActive = False

#### **Connections**

| Connector             | Source                    | Target         | Notes |
|-----------------------|---------------------------|----------------|-------|
| Aggregation           | Public                    | Public         |       |
| Source -> Destination | E18_05_0MedicationD osing | E18_Medication |       |
|                       |                           |                |       |

#### Attributes

| Attribute              | Notes   | Constraints and tags       |
|------------------------|---|----------------------------|
| medicationDosage QTY   | The dose or amount of medication given to the   | Default:                   |
| Private                | patient   | NEMSIS Reference: { E18_05 |
|                        |   | Medication Dosage }        |
| [01]                   |   |                            |
| [0.12]                 |   |                            |
|                        |   |                            |
|                        |   |                            |
| medicationDosageUnitsC | The units of medication dosage given to patient | Default:                   |
| ode CD                 |   | NEMSIS Reference: { E18_06 |
| Private                |   | Medication Dosage Units }  |
|                        |   |                            |
| [01]                   |   |                            |
| [0.12]                 |   |                            |
|                        |   |                            |

# E18\_Medication

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: Sandbox E18 Keywords:

 Detail:
 Created on 8/12/2009. Last modified on 8/12/2009.

 GUID:
 {0FC59C8A-38E9-423f-AD35-AB72093A3CCA}

# **Custom Properties**

• isActive = False

#### **Connections**

| Connector             | Source              | Target         | Notes |
|-----------------------|---------------------|----------------|-------|
| Aggregation           | Public              | Public         |       |
| Source -> Destination | E18_05_0MedicationD | E18_Medication |       |
|                       | osing               |                |       |
|                       |                     |                |       |

| Attribute | Notes | Constraints and tags |
|-----------|-------|----------------------|
|-----------|-------|----------------------|

| es that the medication administration s documented was administered prior to IS unit's care. | Default: NEMSIS Reference: { E18_01 Date/Time Medication Administered }  Default: NEMSIS Reference: { E18_02 Medication Administered Prior To This Units EMS Care }  Default: NEMSIS Reference: { E18_03 Medication Given } |
|--|---|
| s documented was administered prior to IS unit's care.                                       | NEMSIS Reference: { E18_02 Medication Administered Prior To This Units EMS Care }  Default: NEMSIS Reference: { E18_03  |
| dication given to the patient  | NEMSIS Reference: { E18_03  |
|  |   |
| nte that the medication was administered atient.   | Default: NEMSIS Reference: { E18_04 Medication Administered Route }   |
| ient's response to the medication.   | Default: NEMSIS Reference: { E18_07 Response To Medication }  |
| associated with the administration of  | Default: NEMSIS Reference: { E18_08 Medication Complication }   |
| )  | omplication (abnormal effect on the administration of dication to the patient by EMS  |

| Attribute   | Notes  | Constraints and tags   |
|---|--|--|
| medicationCrewMember ID II Private  [01]              | The statewide assigned ID number of the EMS crew member giving the treatment to the patient  | NEMSIS Reference: { E18_09<br>Medication Crew Member ID }              |
| medicationAuthorization<br>Code CD<br>Private<br>[01] | The type of treatment authorization obtained   | Default: NEMSIS Reference: { E18_10 Medication Authorization }         |
| medicationAuthorization Physician EN.PN Private  [01] | The last name of the authorizing physician ordering the medication administration if the order was provided by any manner other than protocol (standing order) in E18.10 | Default: NEMSIS Reference: { E18_11 Medication Authorizing Physician } |

## Sandbox E19

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Information Model Sand Box

Detail: Created on 8/12/2009. Last modified on 8/12/2009 GUID: {44DD8FBE-3DF9-4344-9D62-CF081B46054E}

 $\underline{Sandbox~E19} \text{ - } (Logical~diagram)$ 

Created By: AbdulMalik Shakir on 8/12/2009

*Last Modified:* 8/12/2009

Version: 1.0. Locked: False

GUID: {A40AFCCA-BF20-4b0f-876C-454249029311}

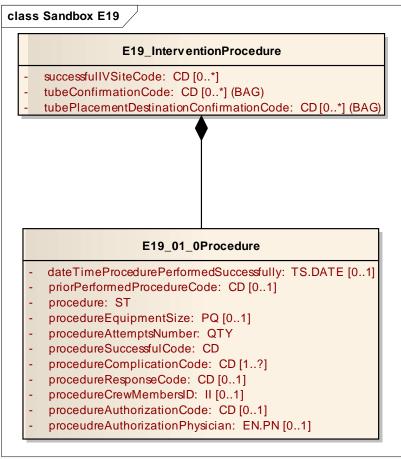


Figure: 61

## E19\_01\_0Procedure

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: Sandbox E19 Keywords:

*Detail: Created on 8/12/2009. Last modified on 8/12/2009. GUID:* {D5B25955-D85C-4fff-A268-FFC853673527}

### **Custom Properties**

• isActive = False

### **Connections**

| Connector             | Source            | Target                | Notes |
|-----------------------|-------------------|-----------------------|-------|
| <b>Aggregation</b>    | Public            | Public                |       |
| Source -> Destination | E19_01_0Procedure | E19_InterventionProce |       |
|                       |                   | dure                  |       |
|                       |                   |                       |       |

**Attributes** 

|  | <u>Attributes</u>  |   |  |  |
|--|--|---|--|--|
| Attribute  | Notes  | Constraints and tags  |  |  |
| dateTimeProcedurePerfo<br>rmedSuccessfully<br>TS.DATE<br>Private | The date and time the procedure was performed on the patient                               | Default: NEMSIS Reference: { E19_01 }   |  |  |
|  |  |   |  |  |
| priorPerformedProcedur   | Indicates that the procedure which was   | Default:  |  |  |
| eCode CD<br>Private  | performed and documented was performed prior to this EMS unit's care.                      | NEMSIS Reference: { E19_02<br>Procedure Performed Prior To This<br>Units EMS Care } |  |  |
| [01]   |  |   |  |  |
| procedure ST<br>Private  | The procedure performed on the patient.  | Default: NEMSIS Reference: { E19_03 The procedure performed on the patient. }       |  |  |
| procedureEquipmentSize PQ Private [01]                           | The size of equipment used in the procedure on the patient                                 | Default: NEMSIS Reference: { E19_04 Size Of Procedure Equipment }                   |  |  |
| procedureAttemptsNumb<br>er QTY<br>Private                       | The number of attempts taken to complete a procedure or intervention regardless of success | Default: NEMSIS Reference: { E19_05 Number Of Procedure Attempts }                  |  |  |
| procedureSuccessfulCode<br>CD<br>Private                         | Indication of whether or not the procedure performed on the patient was successful         | Default:  |  |  |

| Attribute  | Notes   | Constraints and tags  |
|--|---|---|
| procedureComplicationC ode CD Private [1?]                   | Any complication associated with the performance of the procedure on the patient  | NEMSIS Reference: { E19_07 Procedure Complication }                     |
| procedureResponseCode<br>CD<br>Private                       | The patient's response to the procedure   | Default: NEMSIS Reference: { E19_08 Response To Procedure }             |
| procedureCrewMembers ID II Private  [01]                     | The statewide assigned ID number of the EMS crew member performing the procedure on the patient   | Default: NEMSIS Reference: { E19_09 Procedure Crew Members ID }         |
| procedureAuthorization Code CD Private  [01]                 | The type of procedure authorization obtained  | Default: NEMSIS Reference: { E19_10 Proceudre Authorization }           |
| proceudreAuthorizationP<br>hysician EN.PN<br>Private<br>[01] | The last name of the authorizing physician ordering the procedure, if the order was provided by any manner other than protocol (standing order) | Default: NEMSIS Reference: { E19_11 Procedure Authorization Physician } |

# E19\_InterventionProcedure

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: Sandbox E19 Keywords:

Detail: Created on 8/12/2009. Last modified on 8/12/2009. GUID: {25C1E386-4719-4484-9CED-2B5E8528CA20}

### **Custom Properties**

• isActive = False

### **Connections**

| Connector             | Source            | Target                     | Notes |
|-----------------------|-------------------|----------------------------|-------|
| Aggregation           | Public            | Public                     |       |
| Source -> Destination | E19_01_0Procedure | E19_InterventionProce dure |       |
|                       |                   |                            |       |

### **Attributes**

| Attribute  | Notes   | Constraints and tags   |
|--|---|--|
| successfulIVSiteCode CD<br>Private   | The location of the IV site (if applicable) on the patient                                | Default: NEMSIS Reference: { E19_12 Successful IV Site }                         |
| [0*]   |   |  |
| tubeConfirmationCode CD Private  Collection [0*]                                 | Endotracheal Tube placement verification at the time the airway procedure was done        | Default: NEMSIS Reference: { E19_13 Tube Confirmation }                          |
| tubePlacementDestinatio<br>nConfirmationCode CD<br>Private<br>Collection<br>[0*] | Endotracheal Tube location verification on the arrival at the Destination (if applicable) | Default: NEMSIS Reference: { E19_14 Destination Confirmation Of Tube Placement } |

## Sandbox E20

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Information Model Sand Box

Detail: Created on 8/13/2009. Last modified on 8/13/2009
GUID: {A7D024C9-DBC3-4b9f-AC09-C638AC2A671A}

Sandbox E20 - (Logical diagram)

Created By: AbdulMalik Shakir on 8/13/2009

*Last Modified:* 8/13/2009

Version: 1.0. Locked: False

GUID: {EDAA9492-280A-4983-B652-02F6A8E8A0DB}

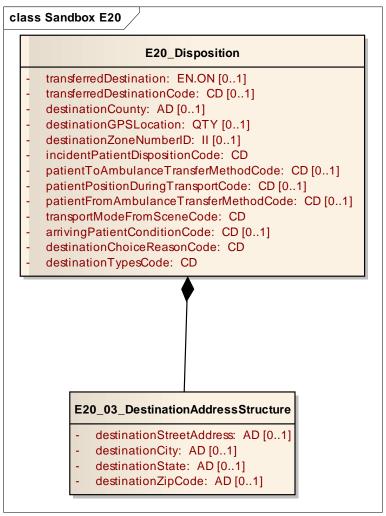


Figure: 62

### E20\_03\_DestinationAddressStructure

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: Sandbox E20 Keywords:

Detail: Created on 8/13/2009. Last modified on 8/13/2009. GUID: {786EB5ED-037B-48ab-99C4-9507F5EF79AD}

### **Custom Properties**

• isActive = False

### **Connections**

| Connector             | Source               | Target          | Notes |
|-----------------------|----------------------|-----------------|-------|
| Aggregation           | Public               | Public          |       |
| Source -> Destination | E20_03_DestinationAd | E20_Disposition |       |
|                       | dressStructure       |                 |       |
|                       |                      |                 |       |

Attributes

| Attribute                                 | Notes   | Constraints and tags   |
|---|---|--|
| destinationStreetAddress<br>AD<br>Private | The street address of the destination the patient was delivered or transferred to | Default: NEMSIS Reference: { E20_03 Destination Street Address } |
| [01]                                      |   |  |
| destinationCity AD                        | The city name of the destination the patient was                                  | Default:   |
| Private                                   | delivered or transferred to   | NEMSIS Reference: { E20_04<br>Destination City }                 |
| [01]                                      |   |  |
| destinationState AD                       | The destination State in which the patient was                                    | Default:   |
| Private AD                                | delivered or transferred to   | NEMSIS Reference: { E20_05 Destination State }                   |
| [01]                                      |   |  |
|   |   |  |
| destinationZipCode AD<br>Private          | The destination zip code in which the patient was delivered or transferred to     | Default: NEMSIS Reference: { E20_07 Destination Zip Code }       |
| [01]                                      |   |  |
|   |   |  |

# E20\_Disposition

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: Sandbox E20 Keywords:

Detail: Created on 8/13/2009. Last modified on 8/13/2009. GUID: {1E74C688-0AD1-476e-966A-6CC484A5975A}

### **Custom Properties**

• isActive = False

**Connections** 

| Connector             | Source                              | Target          | Notes |
|-----------------------|-------------------------------------|-----------------|-------|
| Aggregation           | Public                              | Public          |       |
| Source -> Destination | E20_03_DestinationAd dressStructure | E20_Disposition |       |
|                       |                                     |                 |       |

**Attributes** 

| Attribute                                  | Notes   | Constraints and tags   |
|--|---|--|
| transferredDestination<br>EN.ON<br>Private | The destination the patient was delivered or transferred to                             | Default: NEMSIS Reference: { E20_01 Destination/ Transfered To, Name } |
| transferredDestinationCo                   | The code of the destination the patient was delivered or transferred to, if present and | Default: NEMSIS Reference: { E20_02                                    |
| Private  [01]                              | available   | Destination/Transferred To, Code }                                     |
| destinationCounty AD Private               | The destination County in which the patient was delivered or transferred to             | Default: NEMSIS Reference: { E20_06                                    |
| [01]                                       |   | Destination County }   |
| destinationGPSLocation<br>QTY<br>Private   | The destination GPS coordinates to which the patient was delivered or transferred to    | Default: NEMSIS Reference: { E20_08 Destination GPS Location }         |
| [01]                                       |   |  |

| Attribute  | Notes   | Constraints and tags   |
|--|---|--|
| destinationZoneNumberI D II Private [01]                         | The zone number of the destination the patient was delivered or transferred to              | Default: NEMSIS Reference: { E20_09 Destination Zone Number }                    |
| incidentPatientDispositio<br>nCode CD<br>Private                 | Type of disposition treatment and/or transport of the patient.                              | Default: NEMSIS Reference: { E20_10 Incident/Patient Disposition }               |
| patientToAmbulanceTra<br>nsferMethodCode CD<br>Private<br>[01]   | The method the patient was moved to the ambulance from the scene                            | Default: NEMSIS Reference: { E20_11 How Patient Was Moved To Ambulance }         |
| patientPositionDuringTr<br>ansportCode CD<br>Private             | The position of the patient during transport from the scene                                 | Default: NEMSIS Reference: { E20_12 Position Of Patient During Transport }       |
| patientFromAmbulanceT<br>ransferMethodCode CD<br>Private<br>[01] | The method the patient was moved from the ambulance to the destination                      | Default: NEMSIS Reference: { E20_13 How Patient Was Transported From Ambulance } |
| transportModeFromScen<br>eCode CD<br>Private                     | Indication whether or not lights and/or sirens were used on the vehicle while leaving scene | Default: NEMSIS Reference: { E20_14 Transport Mode From Scene }                  |

| Attribute                                      | Notes   | Constraints and tags  |
|--|---|---|
| arrivingPatientCondition Code CD Private  [01] | The condition of the patient after care by EMS                                  | Default: NEMSIS Reference: { E20_15 Condition Of Patient At Destination } |
| destinationChoiceReason<br>Code CD<br>Private  | The reason the unit chose to deliver or transfer the patient to the destination | Default: NEMSIS Reference: { E20_16 Reason For Choosing Destination }     |
| destinationTypesCode<br>CD<br>Private          | The type of destination the patient was delivered or transferred to             | Default: NEMSIS Reference: { E20_17 Type Of Destination }                 |

## Sandbox E21

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Information Model Sand Box

 Detail:
 Created on 8/13/2009. Last modified on 8/13/2009

 GUID:
 {1893BAB1-DC9A-4c9c-BD87-1DF8A02BA6FF}

 $\underline{Sandbox~E21} \text{ - } (Logical~diagram)$ 

Created By: AbdulMalik Shakir on 8/13/2009

*Last Modified:* 8/13/2009

Version: 1.0. Locked: False

*GUID*: {B001F744-8520-4670-A307-8537F87DC346}

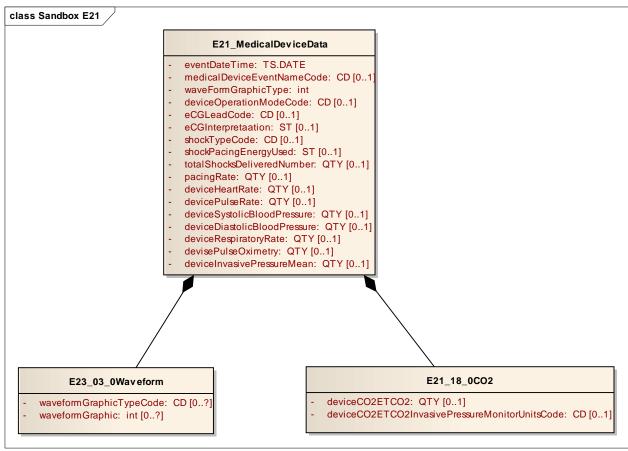


Figure: 63

## E21\_18\_0CO2

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: Sandbox E21 Keywords:

Detail: Created on 8/13/2009. Last modified on 8/13/2009. GUID: {CD0A9FC5-6ED8-4681-A141-519106BBD76A}

### **Custom Properties**

• isActive = False

### **Connections**

| Connector             | Source      | Target               | Notes |
|-----------------------|-------------|----------------------|-------|
| Aggregation           | Public      | Public               |       |
| Source -> Destination | E21_18_0CO2 | E21_MedicalDeviceDat |       |
|                       |             | a                    |       |
|                       |             |                      |       |

Attributes

| Attribute              | Notes  | Constraints and tags            |
|------------------------|--|---------------------------------|
| deviceCO2ETCO2 QTY     | The Carbon Dioxide or end-tidal Carbon         | Default:                        |
| Private                | Dioxide as measured from the device            | NEMSIS Reference: { E21_18      |
|                        | transducers (if appropriate for the event)     | Device CO2 Or ETCO2 }           |
|                        |  |                                 |
| [01]                   |  |                                 |
|                        |  |                                 |
|                        |  |                                 |
|                        |  |                                 |
| deviceCO2ETCO2Invasi   | The Units of Carbon Dioxide, end-tidal Carbon  | Default:                        |
| vePressureMonitorUnits | Dioxide, invasive pressure monitor 1, or       | NEMSIS Reference: { Device CO2, |
| Code CD                | invasive pressure monitor 2 as measured from   | ETCO2, Or Invasive Pressure     |
| Private                | the device transducers (if appropriate for the | Monitor Units }                 |
|                        | event)   |                                 |
| [01]                   |  |                                 |
| [01]                   |  |                                 |
|                        |  |                                 |

## E21\_MedicalDeviceData

*Type:* Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: Sandbox E21 Keywords:

Detail: Created on 8/13/2009. Last modified on 8/13/2009. GUID: {8F71BD2D-2A7D-4b46-AF84-E80411B67AD6}

### **Custom Properties**

• isActive = False

### **Connections**

| Connector             | Source           | Target               | Notes |
|-----------------------|------------------|----------------------|-------|
| <b>Aggregation</b>    | Public           | Public               |       |
| Source -> Destination | E23_03_0Waveform | E21_MedicalDeviceDat |       |
|                       |                  | a                    |       |
|                       |                  |                      |       |
| <b>Aggregation</b>    | Public           | Public               |       |
| Source -> Destination | E21_18_0CO2      | E21_MedicalDeviceDat |       |
|                       |                  | a                    |       |
|                       |                  |                      |       |

### <u>Attributes</u>

| Attribute | Notes | Constraints and tags |
|-----------|-------|----------------------|
|           |       | <u> </u>             |

| Attribute                                    | Notes   | Constraints and tags  |
|--|---|---|
| eventDateTime TS.DATE Private                | The time of the event recorded by the device's internal clock   | Default: NEMSIS Reference: { E21_01 Event Date/Time }           |
| medicalDeviceEventNam<br>eCode CD<br>Private | The type of event documented by the medical device.   | Default: NEMSIS Reference: { E21_02 Medical Device Event Name } |
| waveFormGraphicType int Private              |   | Default:  |
| deviceOperationModeCo<br>de CD<br>Private    | The mode of operation the device is operating in during the defibrillation, pacing, or rhythm analysis by the device (if appropriate for the event) | Default: NEMSIS Reference: { E21_05 AED, Pacing, Or C02 Mode }  |
| eCGLeadCode CD<br>Private<br>[01]            | The lead or source which the medical device used to obtain the rhythm (if appropriate for the event)  | Default: NEMSIS Reference: { E21_06 ECG Lead }                  |
| eCGInterpretaation ST<br>Private<br>[01]     | The interpretation of the rhythm by the device (if appropriate for the event)   | Default: NEMSIS Reference: { E21_07 ECG Interpretation }        |

| Attribute                                     | Notes  | Constraints and tags   |
|---|--|--|
| shockTypeCode CD<br>Private                   | The energy form used by the device for the defibrillation (if appropriate for the event)   | Default: NEMSIS Reference: { E21_08 Type Of Shock }                    |
| [01]  |  |  |
| shockPacingEnergyUsed ST Private [01]         | The energy used for the shock or pacing event (if appropriate for the event)   | Default: NEMSIS Reference: { E21_09 Shock Or Pacing Energy }           |
| totalShocksDeliveredNu<br>mber QTY<br>Private | The number of times the patient was defibrillated, if the patient was defibrillated during the patient encounter.                          | Default: NEMSIS Reference: { E21_10 Total Number Of Shocks Delivered } |
| [01]  |  |  |
| pacingRate QTY Private [01]                   | The rate the device was calibrated to pace during the event, if appropriate.   | Default: NEMSIS Reference: { E21_11 Pacing Rate }                      |
| deviceHeartRate QTY                           | The heart rate electronically obtained by the  | Default:   |
| Private                                       | device (if appropriate for the event)  | NEMSIS Reference: { E21_12<br>Device Heart Rate }                      |
| [01]  |  |  |
| devicePulseRate QTY Private                   | The pulse rate as measured from the pulse oximeter, non-invasive pressure, or invasive pressure transducers (if appropriate for the event) | Default: NEMSIS Reference: { E21_13 Device Pulse Rate }                |
| [01]  |  |  |

| Attribute                                      | Notes  | Constraints and tags   |
|--|--|--|
| deviceSystolicBloodPress<br>ure QTY<br>Private | The Systolic Blood Pressure as measured either through non-invasive blood pressure, invasive blood pressure monitor 1, or invasive blood pressure monitor 2 (if appropriate for the event) | Default: NEMSIS Reference: { E21_14 Device Systolic Blood Pressure } |
| [01]   |  |  |
| deviceDiastolicBloodPres                       | The Diastolic Blood Pressure as measured   | Default:   |
| sure QTY                                       | either through non-invasive blood pressure,  | NEMSIS Reference: { E21_15   |
| Private  | invasive blood pressure monitor 1, or invasive blood pressure monitor 2 (if appropriate for the event)   | Device Diastolic Blood Pressure }                                    |
| [01]   | Crondy   |  |
| deviceRespiratoryRate                          | The Respiratory Rate as calculated from the  | Default:   |
| QTY  | device through one of the various monitoring   | NEMSIS Reference: { E21_16   |
| Private  | parameters (if appropriate for the event)  | Device Respiratory Rate }  |
| [01]   |  |  |
| devisePulseOximetry                            | The Oxygen Saturation as measured from the   | Default:   |
| QTY  | pulse oximeter in % (if appropriate for the  | NEMSIS Reference: { E21_17   |
| Private  | event)   | Device Pulse Oximetry }  |
| [01]   |  |  |
| deviceInvasivePressureM                        | The Invasive Pressure Mean as calculated   | Default:   |
| ean QTY  | either through the invasive pressure monitor 1   | NEMSIS Reference: { E21_20   |
| Private  | or the invasive pressure monitor 2 (if appropriate for the event)  | Device Invasive Pressure Mean }                                      |
| [01]   |  |  |
|  |  |  |

## E23\_03\_0Waveform

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: Sandbox E21 Keywords:

Detail: Created on 8/13/2009. Last modified on 8/13/2009. GUID: {D5F636F4-559B-42e4-873B-276B484DE666}

### **Custom Properties**

• isActive = False

#### **Connections**

| Connector             | Source           | Target               | Notes |
|-----------------------|------------------|----------------------|-------|
| Aggregation           | Public           | Public               |       |
| Source -> Destination | E23_03_0Waveform | E21_MedicalDeviceDat |       |
|                       |                  | a                    |       |
|                       |                  |                      |       |

### Attributes

| Attribute            | Notes  | Constraints and tags       |
|----------------------|--|----------------------------|
| waveformGraphicTypeC | The type of waveform file stored in Waveform | Default:                   |
| ode CD               | Graphic (E21.4)                              | NEMSIS Reference: { E21_03 |
| Private              |  | Waveform Graphic Type }    |
|                      |  |                            |
|                      |  |                            |
| [0?]                 |  |                            |
|                      |  |                            |
|                      |  |                            |
| waveformGraphic int  | The graphic waveform file in a PDF or JPG    | Default:                   |
| Private              | format.                                      | NEMSIS Reference: { E21_04 |
|                      |  | Waveform Graphic }         |
| 50.03                |  |                            |
| [0?]                 |  |                            |
|                      |  |                            |
|                      |  |                            |
|                      |  |                            |

## Sandbox E22

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Information Model Sand Box

 Detail:
 Created on 8/13/2009. Last modified on 8/13/2009

 GUID:
 {B221CD08-2C89-4eee-B5EC-9A673895758C}

 $\underline{Sandbox~E22} \text{ - } (Logical~diagram)$ 

Created By: AbdulMalik Shakir on 8/13/2009

*Last Modified:* 8/14/2009

Version: 1.0. Locked: False

GUID: {A8BC1059-3AF2-4993-9F53-81F04EC6DFF4}

### class Sandbox E22

### E22\_OutcomeLinkage

- emergencyDepartmentDispositionCode: CD
- hospitalDispositionCode: CD
- lawEnforcementCrashReportNumberID: II [0..1]
- traumaRegistryID: II [0..1]
- fireIncidentReportNumberID: II [0..1]
  - patientIDBand: II [0..1]

Figure: 64

## E22\_OutcomeLinkage

Type: Class

Status: Proposed. Version 1.0. Phase 1.0.

Package: Sandbox E22 Keywords:

Detail: Created on 8/13/2009. Last modified on 8/13/2009. GUID: {F608C2A9-E866-4330-8269-694530D37E37}

### **Custom Properties**

• isActive = False

#### Attributes

| Attribute  | Notes   | Constraints and tags   |
|--|---|--|
| emergencyDepartmentDi<br>spositionCode CD<br>Private | The known disposition of the patient from the Emergency Department (ED)         | Default: NEMSIS Reference: { E22_01 Emergency Department Disposition } |
| hospitalDispositionCode<br>CD<br>Private             | Indication of how the patient was dispositioned from the hospital, if admitted. | Default: NEMSIS Reference: { E22_02 Hospital Disposition }             |

| Attribute   | Notes   | Constraints and tags  |
|---|---|---|
| lawEnforcementCrashRe<br>portNumberID II<br>Private | The unique number associated with the law enforcement or crash report which can be used for linkage at a later date.                              | Default: NEMSIS Reference: { E22_03 Law Enforcement/Crash Report Number } |
| [01]  |   |   |
| traumaRegistryID II<br>Private                      | The unique number associated with the local or state trauma registry which can be used for linkage at a later date.                               | Default: NEMSIS Reference: { E22_04 Trauma Registry ID }                  |
| [01]  |   |   |
| fireIncidentReportNumb                              | The unique number associated with the fire  | Default:  |
| erID II<br>Private                                  | incident report which can be used for linkage at a later date.  | NEMSIS Reference: { E22_05 Fire Incident Report Number }                  |
| [01]  |   |   |
| patientIDBand II<br>Private<br>[01]                 | The unique number associated with a patient ID band agency. This is used by a few states as a universal linkage between healthcare data agencies. | Default: NEMSIS Reference: { E22_06 Patient ID Band/Tag Number }          |
| [01]  |   |   |

### Sandbox E23

Type: Package

Status: Proposed. Version 1.0. Phase 1.0. Package: Information Model Sand Box

Detail: Created on 8/14/2009. Last modified on 8/14/2009 GUID: {FBE8D31B-F88E-4136-80B5-81BAA5555F2D}

Sandbox E23 - (Logical diagram)

Created By: AbdulMalik Shakir on 8/14/2009

*Last Modified:* 8/14/2009

Version: 1.0. Locked: False

GUID: {CEEE064F-FACA-47d1-A84D-445E003E619F}

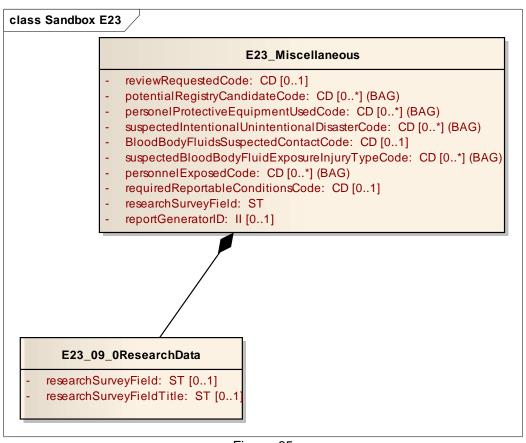


Figure: 65

## E23\_09\_0ResearchData

Type: <u>Class</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Sandbox E23 Keywords:

 Detail:
 Created on 8/14/2009. Last modified on 8/14/2009.

 GUID:
 {9445A99E-9E3E-4624-ACE3-CC8C1E537A1F}

### **Custom Properties**

• isActive = False

### **Connections**

| Connector             | Source               | Target            | Notes |
|-----------------------|----------------------|-------------------|-------|
| <b>Aggregation</b>    | Public               | Public            |       |
| Source -> Destination | E23_09_0ResearchData | E23_Miscellaneous |       |
|                       |                      |                   |       |

### **Attributes**

| Attribute                         | Notes   | Constraints and tags  |
|-----------------------------------|---|---|
| researchSurveyField ST<br>Private | A customizable field to be used by local agencies for additional documentation or research. | Default: NEMSIS Reference: { E23_09 Research Survey Field } |
| [01]                              | research.   | Research Survey Field 3                                     |
|                                   |   |   |
| researchSurveyFieldTitle<br>ST    | A customizable field to be used by local agencies for additional documentation or           | Default:<br>NEMSIS Reference: { E23_11                      |
| Private                           | research.   | Research Survey Field Title }                               |
| [01]                              |   |   |
|                                   |   |   |

## E23\_Miscellaneous

Type: <u>Class</u>

Status: Proposed. Version 1.0. Phase 1.0.

Package: Sandbox E23 Keywords:

 Detail:
 Created on 8/14/2009. Last modified on 8/14/2009.

 GUID:
 {ADE15C63-CEA2-4d25-AC65-978B4CB2C62C}

### **Custom Properties**

• isActive = False

### **Connections**

| Connector             | Source               | Target            | Notes |
|-----------------------|----------------------|-------------------|-------|
| <b>Aggregation</b>    | Public               | Public            |       |
| Source -> Destination | E23_09_0ResearchData | E23_Miscellaneous |       |
|                       |                      |                   |       |

### Attributes

| Authories           |  |                            |
|---------------------|--|----------------------------|
| Attribute           | Notes  | Constraints and tags       |
| reviewRequestedCode | Indication of whether the form needs review by | Default:                   |
| CD                  | anyone.  | NEMSIS Reference: { E23_01 |
| Private             |  | Review Requested }         |
| [01]                |  |                            |

| Attribute   | Notes  | Constraints and tags  |
|---|--|---|
| potentialRegistryCandida<br>teCode CD<br>Private<br>Collection<br>[0*]                    | An indication if the patient may meet the entry criteria for a injury or illness specific registry | NEMSIS Reference: { E23_02 Potential Registry Candidate }   |
| personelProtectiveEquip<br>mentUsedCode CD<br>Private<br>Collection<br>[0*]               | The personal protective equipment which was used by EMS personnel during this EMS patient contact. | Default: NEMSIS Reference: { E23_03 Personal Protective Equipment Used }                              |
| suspectedIntentionalUnin<br>tentionalDisasterCode<br>CD<br>Private<br>Collection<br>[0*]  | Suspicion of the listed multi-casualty or domestic terrorism causes.                               | Default: NEMSIS Reference: { E23_04 Suspected Intentional, Or Unintentional Disaster }                |
| BloodBodyFluidsSuspect<br>edContactCode CD<br>Private  [01]                               | Indication of unprotected contact with blood or body fluids  | Default: NEMSIS Reference: { E23_05 Suspected Contact With Blood/Body Fluids Of EMS Injury Or Death } |
| suspectedBloodBodyFlui<br>dExposureInjuryTypeCo<br>de CD<br>Private<br>Collection<br>[0*] | The type of exposure or unprotected contact with blood or body fluids                              | Default: NEMSIS Reference: { Type Of Suspected Blood/Body Fluid Exposure, Injury, Or }                |
| personnelExposedCode CD Private  Collection [0*]  | The EMS personnel who was/were exposed to unprotected contact with blood or body fluids            | Default: NEMSIS Reference: { E23_07 Personnel Exposed }   |

| Attribute  | Notes  | Constraints and tags   |
|--|--|--|
| requiredReportableCond<br>itionsCode CD<br>Private | The presence of any condition which is reportable based on federal or state regulations.         | Default: NEMSIS Reference: { E23_08 Required Reportable Conditions } |
| [01]   |  |  |
| researchSurveyField ST<br>Private                  |  | Default:   |
| reportGeneratorID II<br>Private                    | The statewide assigned ID number of the EMS crew member which completed this patient care report | Default: NEMSIS Reference: { E23_10 Who Generated This Report }      |
| [01]   |  |  |