# Home-care Care Plan Storyboard – V0.4a

# (HL7 Patient Care Work group 2012-02-28)

* 1. Introduction to HL7 Care Plan Storyboards

HL7 International Patient Care Work Group (PCWG) ([http://wiki.hl7.org/index.php? title=Patient\_Care](http://wiki.hl7.org/index.php?%20title=Patient_Care)) has launched a new initiative, the Care Plan Initiative Project 2011, (<http://wiki.hl7.org/index.php?title=Care_Plan_Initiative_project_2011>) to conduct a Domain Analysis Process (DAP) for Care Planning that will lead to updating the existing Draft For Trial Use (DSTU) version. The resulting Domain Analysis Model (DAM) will be an analysis model that describes business processes, use cases, process flows, business triggers, and the information exchanged that are derived from a project's requirements. A DAM is equivalent to a Requirements Analysis Specification and contains not only an information model but also a comprehensive analysis model which includes business processes, system interactions and behavioral/dynamic aspects. The focus is on interoperability in information sharing among different health care actors (i.e. providers, organizations, patient, other carers). (Ref 1, HL7 HDF 1.5)

Storyboards are one of the first deliverables of the initiative. A storyboard is a narrative description of a series of steps involving some exchange of information between different participants to achieve the objectives of a healthcare business process. The list of steps can be in generalized, abstract terms, or in the form of a real-world example.

The PCWG has identified six stories that would provide sufficient coverage of situations for the HL7 Care Plan DAM:

* Acute Care
* Chronic Care
* Home Care
* Pediatric and Allergy/Intolerance
* Perinatology
* Stay healthy/ health promotion

A storyboard content is developed primarily from guidance by the domain experts. Some guidelines in preparing a SB:

* Focused on one typical story, not on exceptions
* Is written using common clinical terms, not in technical or IT terms (is architecture, implementation and platform independent), and it uses business terminology to illustrate the context for the message exchange, functional model, etc.
* Focused on the exchange of information about care plan; a clear distinction is made between Care Plan information and medical record information or other non care plan specific data (e.g. lab results, referral request)
* Identifies what should be a best practice in the exchange of clinical information, i.e. what is described here may not be the reality in some cases.
* Subjected to the VACCI test: Validity, Accuracy, Completeness, Clarity and Integration (that all the components are well interconnected/integrated and the flows of events are logical and smooth)

Note: general comments will be captured in section 1.11. Eventually, these comments from all the storyboards will be inputs to the statement of requirements for the care plan.

Notes: Readers can find a brief glossary in Appendix A and short descriptions of information created and exchanged in Appendix B. Quoted references are listed in Appendix C. A history of changes to the document is kept in Appendix D.

* 1. Short Description of the Health Issue Thread covered in the Storyboard

The purpose of the home-care care plan storyboard is to illustrate the communication flow and documentation of a care plan between a patient, his or her primary care provider and the home health specialists involved in the rehabilitation efforts for a patient recovering from a stroke. This health issue thread (simplified) consists of five encounters, although in reality there could be many more encounters:

1. Hospital Discharge
2. Ambulatory Rehabilitation Clinic Visit
3. Home Health Visit
4. Primary Care Visit
5. Dietician Visit

Brief descriptions of the information exchanged are provided in Appendix B using a IDnnn code as cross reference. A brief glossary is provided in Appendix A.

Care coordination should occur throughout the health issue thread, across several care settings and several care providers/givers. It is briefly discussed later in this document (section 1.10), after the series of encounters.

* 1. Storyboard Actors and Roles

Hospital Attending Physician

Dr. Aaron Attend

Primary Care Physician

Dr. Patricia Primary:

Patient

Eve Everywoman:

Occupational Therapist

Pamela Player

Physical therapist

Seth Stretcher

Speech therapist

George Speaker (not in HL7 list)

Home Health Nurse (Not in HL7 list)

Nancy Nightingale

Dietician

Connie Chow

* 1. Encounter A: Hospital Discharge

### Pre-Condition

Patient Eve Everywoman, a sixty-seven year old female is ready to be discharged from the hospital after having been diagnosed and treated for a stroke.

### Description of Encounter

Hospital Attending Physician Dr. Aaron Attend performs a discharge assessment (ID1) to verify that patient Eve Everywoman is stable enough to be sent home. During the assessment Dr. Aaron Attend reconciles the medications to be continued or added (Note: sometimes meds are changed at discharge to something more appropriate to take at home – e.g. an oral alternative to a parental drug, outlines follow up information and discusses activities to continue at home. He has observed some relatively minor difficulties in walking and in speaking, and therefore recommends some rehabilitation activities with the Ambulatory Rehabilitation Clinic. As Dr. Aaron Attend and Eve Everywoman talk about the goals relating to the plan of care at the rehabilitation clinic and at home, they determine that a home health skilled nurse would be crucial as a complement to the rehabilitation activities they have agreed upon. After the plan of care has been discussed and agreed to, Dr. Aaron Attend documents the care plan (ID2), asks that a referral request (ID3a) be sent to the Ambulatory Rehabilitation Clinic, and schedules a list of rehabilitation activities that are to be performed by a home health skilled nurse (ID3b) in parallel to the Ambulatory Rehabilitation Clinic activities (Note: Usually the nurses, physios and occupational therapists develop a plan and do not consult with the physician).

### Post Condition

Once the care plan was updated, a request for services (ID4a) was sent by administrative personnel to the Ambulatory Rehabilitation Clinic with the patient hospital discharge summary (ID5) and the plan of care (ID6). A referral in the form of a notification (ID4b) was also sent to the home health agency notifying the agency of the need to have a home health nurse visit Eve Everywoman and help in her rehabilitation efforts; this was accompanied by a hospital discharge summary (ID5) and the plan of care (ID6). This same information is sent to the primary care provider (ID7). A copy of the care plan was also given to the patient (ID8a) and the patient was discharged to home.

* 1. Encounter B: Ambulatory Rehabilitation Clinic Visit (in parallel to Home Health Visit)

### Pre-Condition

The Ambulatory Rehabilitation Clinic has scheduled a first visit with patient Eve Everywoman to conduct a full assessment of the condition of Eve and to develop a detailed treatment plan. The case has been assigned to physical therapist Seth Stretcher as the multidisciplinary team lead; Seth has reviewed the information sent by Hospital Attending Physician Dr. Aaron Attend (ID4a, 5 and 6) and has determined that 2 other professionals are needed in the assessment: Occupational Therapist Pamela Player and Speech therapist George Speaker. He informs them of the case. He is aware from the care plan that a Home Health Nurse will be providing home care in parallel and that there will be a need for coordination of rehabilitation efforts with the home care nurse.

### Description of Encounter

Patient Eve Everywoman arrives at the Ambulatory Rehabilitation Clinic and is shown to an assessment room. Physical therapist Seth Stretcher introduces himself and starts a conversation to put Eve at ease. He reviews with her what she has gone through and the care plan prepared by Hospital Attending Physician Dr. Aaron Attend. He performs a preliminary assessment and records his observations and findings (ID8b). He then informs Eve that he would like her to see 2 other professionals, Occupational Therapist Pamela Player and Speech therapist George Speaker. In turn, Pamela and George meet with Eve, record their observations and findings (ID8c and 8d). The 3 professionals meet together, share their findings and agree on specific goals and treatments for the 3 areas of rehabilitation (ID8e). Seth meets with Eve, discusses with her what they have found and what they feel the detailed rehabilitation care plan should be, explains the collaboration between the clinic and the home care nurse, answers her questions, addresses her concerns, and obtains agreement from her on the Ambulatory Rehabilitation Clinic care plan and schedule of activities (ID8f). (Note: the OT could do a ‘home assessment’ to see what changes should be done to the home – carpets, grab bars and so on.)

### Post Condition

A copy of the new care plan and schedule was given to the patient (ID8f) and the patient was sent home. An update to the original care plan is made. A copy of findings (ID8b, c, d) and the care plan and schedule (ID8f) were sent to the home health agency, and a request was made for close coordination of activities at the clinic and in the home (ID8g). A summary of the information was sent as feedback to Primary Care Physician Dr. Patricia Primary and to Hospital Attending Physician Dr. Aaron Attend (ID8h).

* 1. Encounter C: Home Health Visit (in parallel to Ambulatory Rehabilitation Clinic Visit)

### Pre-Condition

Home Health Nurse Nancy Nightingale, upon receiving the request from Dr. Attending (ID4) , acknowledges receipt of the request (ID9), familiarizes herself with the discharge summary, and reviews the notes and activities that Dr. Attending desires to be completed in patient Eve Everywoman’s rehabilitation efforts. A home health visit appointment is scheduled (ID10).

### Description of Encounter

During the first home visit, Home Health Nurse Nancy Nightingale takes a few minutes to introduce herself and gets to know patient Eve Everywoman. Nancy Nightingale uses the care plan as a reference (ID6) as she visits with Eve Everywoman and discusses the rehabilitation efforts Dr. Attend desires. Included in the care plan is the platelet inhibitor and cholesterol reducing medications that Eve Everywoman was discharged on. Nancy Nightingale discusses any questions regarding the medications and or any discharge orders that Eve Everywoman was sent home with. Nancy Nightingale takes a few minutes to perform a quick assessment including a basic set of vital signs and documents this in the appropriate area on the care plan (ID11). As Nancy Nightingale and Eve Everywoman talk about rehabilitation efforts, one of the goals that Eve Everywoman would like to work on emerges: it is about managing her weight. Nancy Nightingale documents this along with a set of realistic interventions and steps on weight management (ID12), including reducing the salt intake and taking the blood pressure regularly.. Nancy shows Eve how to take her own blood pressure readings and how to record them. As Nancy Nightingale leaves this home health visit, she reminds Eve Everywoman of the goals they have discussed and the time of the next visit.

### Post Condition

Home Health Nurse Nancy Nightingale sends an update to the care plan to record the weight management activities and the bolood pressure reading instructions and training. During the next few weeks, Home Health Nurse Nancy Nightingale continues to make home visits to patient Eve Everywoman and assist in rehabilitation efforts. During each visit Nancy is able to reference the care plan and updates assessments and progress (ID13). The time has come for Eve to follow up with her primary care provider.

* 1. Encounter D: Primary Care Visit

### Pre-Condition

Patient Eve Everywoman is scheduled to meet with her primary care provider on a regular basis to assess her health and prevent future complications. Today is Eve Everywoman’s first visit to Primary Care Physician Dr. Patricia Primary since her stroke occurrence and her discharge from hospital. Her primary care provider had been copied on the hospital discharge summary (ID1) and the care plan (ID2).

### Description of Encounter

Primary Care Physician Dr. Patricia Primary reviews patient Eve Everywoman’s hospital discharge summary and most recent care plan, and reviews the assessments and progress notes made over the last four weeks (ID11, 12, 13) as well as the blood pressure recordings made by Eve. Dr. Patricia Primary notices that one of Eve Everywoman’s goals is weight management. Dr. Patricia Primary congratulates Eve Everywoman on her weight loss over the last four weeks and also discusses the advantages of diet along with her exercise. She gains the approval of Eve Everywoman’s to meet with a registered dietician to consult on diet along with her exercise.

### Post Condition

After patient Eve Everywoman leaves the office, Primary Care Physician Dr. Patricia Primary takes a few minutes to update the care plan (ID14) and record (dication or typing) progress notes (ID15), and copies the home care nurse on these. A week after Eve Everywoman’s appointment with Dr. Patricia Primary, Home Health Nurse Nancy Nightingale visits Eve Everywoman. Nancy Nightingale again accesses the care plan (ID14) and reviews the updates and progress notes (ID15) from the appointment with Primary Care Physician Dr. Patricia Primary. Nancy Nightingale notices that Dr. Patricia Primary advised Eve Everywoman to consult with a Dietician and asks Eve Everywoman if she needs any help scheduling that appointment. She adds notes to the care plan (ID16). (Note: usually a physician would send some kind of referral letter in association with the referral or notify the nurse to do that if the nurse and physician are in a multidisciplinary team.)

* 1. Encounter E: Dietician Visit

### Pre-Condition

Due to the recommendation of patient Eve Everywoman’s primary care provider to visit a dietician, patient Eve Everywoman, with the help of her home health nurse scheduled an appointment (ID17). Home Health Nurse Nancy Nightingale sent an up to date care plan (or a link to a centrally hosted one in the EHR) to the Dietician. Eve Everywoman has arrived at the dietician office for the scheduled appointment.

### Description of Encounter

The receptionist at the dietician’s office takes a few moments to register patient Eve Everywoman and verify the identification information that were sent over with the care plan. The receptionist also updates the care plan with the additional nutrition information that Eve Everywoman was instructed to complete (ID18). Dietician Connie Chow visits with patient Eve Everywoman and reviews the care plan including the additional nutritioninformation just updated. After reviewing this information and through the discussion with Eve, Connie Chow is able to assess Eve’s current state of nutrition habits and health (ID19). Connie Chow makes specific recommendations for Eve and notes them in the care plan (ID20).

### Post Condition

Dietician Connie Chow gives to patient Eve Everywoman a copy of the care plan (ID21) with diet recommendations and recommends her to return for a follow up appointment in a couple of weeks. Connie Chow re-emphasizes the importance of maintaining a good diet to prevent other strokes from occurring. A progress note (ID22) is also sent to the home health nurse and to Dr. Patricia Primary updating the events of the appointment.

* 1. About Coordination of Care

In this storyboard, the initial coordination of care provided by all providers would be under the responsibility of the hospital attending physician; however, in most places (to be confirmed), the responsibility ends when the patient is discharged.. This coordination role would then be transferred formally to the primary care physician who may work with a community care coordinator. However, we could see a shared coordination role between the primary care physician and the lead at the Ambulatory Rehabilitation Clinic.

The following sections present general observations about the coordination of care in similar situations, and present various models of care coordination.

### General Observations about Coordination of Care

To be created.

### Coordination of Care Models

Many models are possible. The following ones are of note:

* Add specific models. Include refs
  1. General Comments on this Storyboard

This section captures general comments about this storyboard or care plan exchange of data. Specific comments on contents are integrated at the appropriate places in the SB.

### Comments provided during Fall 2011 Canadian Standards Partnership

The following comments were provided during the Canadian Partnership session on this Storyboard. Multiple clinicians (physicians, nurses, physiotherapist) were present.

* There must be an overarching care plan with nesting of specific care plans by profession;
* The care plan is a living document in constant evolution based on progress achieved, activities planned and conducted, and circumstances and events in the process of care for the patient;
* Key words: dynamic, evolving, shared;
* Goals should be linked to decision support and guidelines;
* Variability must be allowed to take into account jurisdictional context, care settings, and discipline scope and focus;
  + Note: see document prepared by Susan Campbell (Care\_Management\_Concept\_Matrix-v3a-20110623-for\_review.xls) on the wiki: <http://wiki.hl7.org/index.php?title=Working_Documents-CP>
* There should be a schedule of distribution attached to the care plan so key people are not forgotten;
* In some regions, there seems to be limited interest manifested by clinicians to receive paper based care plan; electronic care plan is promising;
* It should be possible to merge care plan goals and activities;
* Allow for care plan reconciliation.

### Comments provided by Ray Simkus, md, Canada

* There are problems when the patient has multiple conditions ( which is the usual situation) and the recommendations for one condition conflict with the recommendations for one of the other conditions.
* About ‘merge care plan goals and activities: Please !! Some EMR vendors just add one template to another template and some of the items are present in each template. The thing would be to merge and have only one entry for any given concept. Care should be taken to not have contradicting statements.
* I heard that about 40% of home care visits are to manage chronic wounds. I was involved with a company in BC that developed a very nice program that allowed the nurse to go into the home, take photos of the wound, enter case notes about the patient, the co-morbidities and so on and details about the wound. These would be sent to the server and a wound expert would be notified that there is new information. The would expert would review the case by being able to look at the previous entries and images and details of what dressings were being used. Then the wound expert would enter some notes and recommendations could be sent out to the nurse in the home and the treatment could be adjusted. A detailed database was kept of patient characteristics and the treatments that were used including the costs of the various dressing materials and the number of visits it took to accomplish.healing. There are about 70,000 images being taken per month in BC. A pilot study showed that the number of visits needed to get to healing was reduce by 40%. Disclaimer: I am no longer involved with this company.

### Comments provided by Bill Clifford, MD Canada

* Agree as usual with all of Ray’s comments, especially the merging of care plan elements into an organized document.
* Care plans have quantitative and qualitative goal elements (e.g. weight goal/date versus goal to “eat more healthily”. In an electronic record, it is important to be able to handle the quantitative elements for reporting/management purposes – e.g. list all patients who have not yet met their weight goal”.
* Coordination of versions of the plan is very difficult if there isn’t a central source of truth – such as a plan hosted on a widely available EHR such as a Health Authority clinical system. With a central plan, links to the master can be provided instead of copies. Providers would be more confident that they have the most recent copy. Doesn’t mean that individuals can’t have / make a copy for their own system as long as it is recognized that the copy is just a snapshot at that point of time – just like a best possible medication history.
* This is the tricky part today – agile updates and dissemination of care plan related data. We are putting care plans in the regional health authority EHR for wide availability and source of truth. That method or alternative such as sending updates to key distribution list needs to be part of the story. Clinical team members need to know trhat they see the latest patient and care plan data.
  1. Appendix A.- Definitions (Glossary)

| **Term/Concept** | **Definition** | **Notes** | **Source/ref.** |
| --- | --- | --- | --- |
| Care plan | Statement, based on needs assessment, of planned health care activities in a health care process. care plan will be reviewed repeatedly during a health care process, each review based on a new needs assessment. |  | ISO/TC215-ISO 13940- System of concepts to support continuity of care-ContSys-Committee Draft- Nov. 2011 |
| Clinical guideline | Set of systematically developed statements to assist the decisions made by health care actors about health care activities to be performed with regard to health issues in specified clinical circumstances |  | ISO 13940 CD |
| Clinical pathway | Structured pattern for a health care workflow to be used in standardised care plans for subjects of  care having similar health conditions with a predictable clinical cours |  | ISO 13940 CD |
| Encounter (contact) | Patient encounter is defined as an interaction between a patient and one or more healthcare practitioners for the purpose of providing patient services or assessing the health status of the patient. (HL7)  Event during which subject of care interacts, directly or indirectly, with one or more health care professionals (ISO, ‘contact’) |  | HL7 Version 3 Standard: Patient Administration Release 2; Patient Encounter, Release 1 DSTU Ballot 1 - May 2011  ISO 13940 CD |
| Feedback | The return of information about the result of a process or activity. |  | Dictionary.com |
| Health issue | Issue related to the health of a subject of care, as identified and labeled by a specific health care actor |  | ISO 13940 CD |
| Health issue thread | Defined association between health issues and/or health issue treads, as decided and labeled by one or several health care actors. A health issue thread inherently associates the health care and clinical processes as well as the health care activity period elements referring to those health issues. |  | ISO 13940 CD |
| Health objective | Desired ultimate achievement of the health care activities in a care plan. A health objective could be expressed as one or several target state |  | ISO 13940 CD |
| Outcome | Something that follows from an action, dispute, situation, etc; result; consequence |  | Dictionary.com. Collins English Dictionary |
| Protocol | Clinical guidelines and/or clinical pathways customised for operational use. A protocol is more precise than a clinical guideline. However it does no more concern any subject of care in particular than a clinical guideline. |  | ISO 13940 CD |
| Target Condition | Possible health condition representing health objectives and/or health care goals |  | ISO 13940 CD |
| Treatment Goal | This could be a functional capability or a lab test value. | Addition suggested by Ray Simkus, md. To replace Target Condition. |  |

* 1. Appendix B.- Description of Information Created and Exchanged

| **ID No.** | **Brief Description of Information** | **Examples** | **Source/ref.** |
| --- | --- | --- | --- |
| 1 | Discharge assessment: functional assessment in relation to daily living | C-HOBIC  interRAI |  |
| 2 | Plan of care: problems to address, associated goals and targets, treatments to be carried out (by type of professional and organization), notes and suggestions, feedback expected |  |  |
| 3a | Referral request: |  |  |
| 3b | Rehabilitation activities for home health skilled nurse: |  |  |
| 4a | Request for services: |  |  |
| 4b | Referral in the form of a notification |  |  |
| 5 | Hospital discharge summary: |  |  |
| 6 | Plan of care sent to home health agency: |  |  |
| 7 | Plan of care sent to primary care provider: |  |  |
| 8a | Copy of plan of care given to patient: |  |  |
| 8b | Physical therapist assessment: |  |  |
| 8c | Occupational Therapist |  |  |
| 8d | Speech therapist |  |  |
| 8e | Rehabilitation clinic goals and treatments: |  |  |
| 8f | Ambulatory Rehabilitation Clinic care plan and schedule of activities: |  |  |
| 8g | Request for close coordination of activities |  |  |
| 8h | Summary sent to physicians (feedback): |  |  |
| 9 | Acknowledgement of request received: |  |  |
| 10 | Home health visit appointment: |  |  |
| 11 | Home assessment: |  |  |
| 12 | Weight management objective and plan: |  |  |
| 13 | Care plan updates and progress: |  |  |
| 14 | Care plan update by primary care physician: |  |  |
| 15 | Progress Notes: |  |  |
| 16 | Care plan update about nutrition: |  |  |
| 17 | Appointment with dietician: |  |  |
| 18 | Nutrition information: simplified nutrition assessment (Note 1 below) |  |  |
| 19 | Nutrition assessment: nutrition assessment (note 1 below); nutritional status; nutrition diagnosis (notes 2 and 3 below) |  |  |
| 20 | Care plan update by dietician: nutrition prescription (note 4 below), proposals, goals |  |  |
| 21 | Care plan for diet recommendations: see 20. See also notes 5, 6 and 7 below. |  |  |
| 22 | Dietician progress note: activities conducted and outcomes |  |  |
| 23 | Patient logs of Blood Pressures (BP), weight or other parameters see Note 1 |  |  |
|  |  |  |  |
|  |  |  |  |

Note 1 (Ref 3- S&I Framework Nutrition & Diet Elements – Oct. 2011): **Nutrition Assessment** : Food and Nutrition related indicators which are used to evaluate the nutritional status of the patient. Five general categories used to evaluate and later assess outcomes are: 1. Food/Nutrition-Related History Outcomes (Food & nutrient intake, food & nutrient administration, medication/herbal supplement use, knowledge/beliefs, food & supplies availability, physical activity, nutrition quality of life) 2. Anthropometric Measurement Outcomes (height, weight, body mass index (BMI), growth pattern indices/percentile ranks, and weight history) 3. Biochemical Data, Medical Tests and Procedures (Lab data (e.g. electrolytes, glucose) and tests (e.g. gastric emptying time, resting metabolic rate) Nutrition-Focused Physical Finding Outcomes (Physical appearance, muscle & fat wasting, swallow function, appetite and affect) Client History (Personal history, medical/health/family history, treatments and complementary/alternative medicine use, and social history)

Note 2 (Ref 3- S&I Framework Nutrition & Diet Elements – Oct. 2011): **Nutrition Diagnosis**: Identification and labeling of a nutrition problem that a food and nutrition professional is responsible for treating independently. Typically includes three categories: 1. Intake (too much or too little of a food or nutrient compared to actual or estimated needs.) 2. Clinical (nutrition problems that relate to medical or physical conditions) 3. Behavioral-Environmental (knowledge, attitudes, beliefs, physical environment, access to food, or food safety)

Note 3 (Ref 3- S&I Framework Nutrition & Diet Elements – Oct. 2011): **Problem or Nutrition Diagnosis Label - PES Statement (Problem/Etiology Signs/Symptoms)**: (Describes alterations in the patient’s nutritional status) Etiology (Cause/Contributing factors linked to the nutrition diagnosis ) Signs/Symptoms (Data used to determine that the patient has the nutrition diagnosis specified, linked to etiology)

Note 4 (Ref 3- S&I Framework Nutrition & Diet Elements – Oct. 2011): **Nutrition Prescription**: Purposefully planned actions intended to positively change a nutrition-related behavior, environmental condition, or aspect of health status for an individual (and his or her family or caregivers), target group, or the community at large. A food and nutrition professional works in conjunction with the patient/client(s) and other health care providers, programs, or agencies during the nutrition intervention phase. Areas include: 1. Food and nutrient delivery (Individualized approach for food & nutrition delivery, including meals & snacks, enteral and parenteral feeding & supplements) 2. Nutrition Education (formal process to instruct/train in a skill to help manage or maintain eating behavior to maintain or improve health) Nutrition Counseling (supportive process via collaboration to set priorities, establish goals and create individualized action plans that acknowledge and foster responsibility for self care to treat an existing condition & promote health.) Coordination of nutrition care (consultation with, referral to, or coordination of nutrition care with other health care providers, institutions, or agencies that can assist in treating or managing nutrition-related problems)

Note 5 (Ref 3- S&I Framework Nutrition & Diet Elements – Oct. 2011): **Nutrition Intervention**: Purposefully planned actions intended to positively change a nutrition-related behavior, environmental condition, or aspect of health status for an individual (and his or her family or caregivers), target group, or the community at large. A food and nutrition professional works in conjunction with the patient/client(s) and other health care providers, programs, or agencies during the nutrition intervention phase. Areas include: 1. Food and nutrient delivery (Individualized approach for food & nutrition delivery, including meals & snacks, enteral and parenteral feeding & supplements) 2. Nutrition Education (formal process to instruct/train in a skill to help manage or maintain eating behavior to maintain or improve health) 3. Nutrition Counseling (supportive process via collaboration to set priorities, establish goals and create individualized action plans that acknowledge and foster responsibility for self care to treat an existing condition & promote health.) 4. Coordination of nutrition care (consultation with, referral to, or coordination of nutrition care with other health care providers, institutions, or agencies that can assist in treating or managing nutrition-related problems)

Note 6 (Ref 3- S&I Framework Nutrition & Diet Elements – Oct. 2011): **Patient Instructions**: Directions to the patient which have been agreed upon between dietitian and patient and conform to diet order, goals and care plan.

Note 7 (Ref 3- S&I Framework Nutrition & Diet Elements – Oct. 2011): **Diet Description**: Narrative description of the recommended diet or daily nutrient intake

Note 8: Note by Ray Simkus, md: should look to see what type of information is collected with interRAI as they have many validated assessment tools. http://www.interrai.org/section/view/

Note 9: exerpts from reference 4: Developing Interoperability Standards for Homecare Plan of Care: Use Case- New York eHealth Collaborative (NYeC) - Version F1 December 21, 2011

**Section 1.2-** **The Homecare Plan of Care**

The homecare provider provides services to the patient as ordered by the physician. Throughout the episode of homecare, the homecare provider and the physician exchange information about the patient’s evolving condition and needs, and the services that the homecare provider will perform. For Certified Home Health Agencies (CHHA), the Centers for Medicare and Medicaid Services (CMS) has specified the content of this exchange in the 485 form (see example in Section 5 - Appendix A).

When the physician refers the patient for homecare, he/she provides current medical information and general orders for homecare. The CHHA homecare provider, by regulation, is required to perform a comprehensive assessment, completing the OASIS as established by CMS and additional items that makes for a comprehensive assessment. The assessment addresses the patient’s medical condition, functional limitations in Activities of Daily Living (ADL), physical home environment, availability of in-home support from family members or other caregivers, and other factors. The assessment also includes a complete inventory of all of the prescribed, over-the-counter, and herbal and biological medications the patient is taking in the home, which the nurse reviews and reconciles with the physician; a reconciliation of the patient’s allergies to medications, foods, and the environment; and an evaluation of the patient’s mental status, including screening for depression. Based on this comprehensive assessment, the nurse proposes a regimen of services to the patient, and goals for treatment. The service regimen specifies the frequency of visits by each homecare discipline (nursing, rehab therapy, social work, etc.) and the duration (in weeks) of such services; the Durable Medical Equipment (DME) that the homecare provider should furnish to the patient; and any specialized types of treatment, such as specific wound care.

The homecare provider sends this assessment and treatment plan to the physician as the homecare Plan of Care (the 485 form). The physician reviews this against the information in the patient’s chart, updates his/her records, makes any changes to the Plan of Care, signs his/her approval, and sends it back to the homecare provider.

Throughout the homecare episode, which may range from several days to many months, the homecare provider makes changes in the Plan of Care as the patient’s condition and needs change, sending each change to the physician for review and approval. The physician can also initiate changes to the Plan of Care as his/her assessment of the patient’s conditions and needs develop over time.

Homecare providers cannot bill Medicare or Medicaid for services until the physician has approved them in the Plan of Care. Homecare providers therefore spend a good deal of effort following up with physicians to have them sign the initial Plan of Care and subsequent changes.

In almost all cases today, the 485 travels between the homecare provider and the physician as a paper or faxed form. This is true even though the homecare provider may generate the Plan of Care from data it holds in electronic form in its EMR, and even though the physician may use an EMR for all of his/her patient records.

**Section 2.-** **Plan of Care Approval Process**

The purpose of this section is to provide the reader a better understanding of how a Homecare Plan of Care is created and exchanged between the homecare provider and the physician.

The Plan of Care is used by different types of homecare providers, namely:

* + Certified Home Health Agency (CHHA)
  + Long Term Home Health Care Program (LTCHHP)
  + Hospice, and
  + Licensed Home Care Services Agency (LHCSA)

The workflow described in the following sections is adaptable to these various providers but resembles that of the CHHA most closely. The workflow is divided into three time points:

* + *INITIAL. O*ccurs at start of care when the comprehensive set of orders is sent to the physician for signature.
  + *ONGOING.* The time period between the initial certification and recertification where changes to the orders (interim orders) can happen at anytime and will require the physician’s signature.
  + *RECERTIFICATION*. The Plan of Care has to be recertified (reviewed and approved) by the physician at regular intervals. The time interval varies by type of homecare provider:
    1. 60 days for Certified Home Health Agencies (CHHA), and Long Term Home Health Care Programs (LTHHCP)
    2. 90 days for the first 2 certification periods, then every 60 days after that for Hospice
    3. 180 days for Licensed Home Care Service Agencies (LHCSA); may vary by state

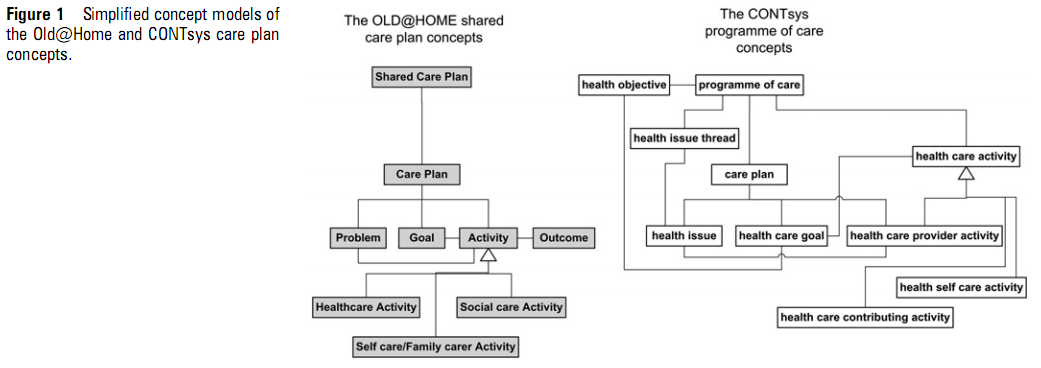
*(A Clinical Summary is also required to be sent to the physician at recertification, however, the creation and exchange of this clinical summary will not be covered in this phase of the project).*

**Section 2.3.-** **Future Process Flowchart, and Section 3.- Use Case: Plan of Care Exchange, etc.**

**See reference document.**

* 1. Appendix C.- References

1. HL7 Healthcare Development Framework Version 1.5 Release 1; Modeling and Methodology Work Group, November 21st , 2009, section 3, pages 34 to 53
2. Modeling shared care plans using CONTsys and openEHR to support shared homecare of the elderly, by Maria Hagglund, Rong Chen, Sabine Koch; Karolinska Institutet, Stockholm, Sweden; J Am Med Inform Assoc 2011;18:66e69. doi:10.1136/jamia.2009.000216; jamia.bmj.com. See summary models below.



1. S&I Framework Nutrition & Diet Elements – Oct. 12, 2011, Academy of Nutrition and Dietetics
2. Developing Interoperability Standards for Homecare Plan of Care: Use Case- New York eHealth Collaborative (NYeC) - Version F1 December 21, 2011
   1. Appendix D.- History of SB Validation Process

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| --- | --- | --- | --- |
| **Date/Period** | **Activity** | **Participants** | **Outcome** |
| June to Sept. 2011 | Draft and reviews | HL7 Care Plan meeting participants | Major updates to SB |
| Nov. 18, 2011 | Final update of Appendices 1 and 2 | André Boudreau | SB ready for review by clinicians |
| 2011-11-24 | Added comments from Canadian Standards partnership participants | Multiple clinicians: md, RN, physios, and other Canadian standards stakeholders | Major support for the initiative |
| 2011-12-20 | Integrated nutrition descritpions | Carolyn Silzle |  |
| 2011-12-31 | Integrated feedback from a Canadian md. | Ray Simkus, md, BC, Canada |  |
| 2012-02-12 | Integrated feedback from a Canadian md. | Bill Clifford, MD Canada |  |
| 2012-02-28 | Integration of notes from NYeC (Ref 4). Last clean-up | André Boudreau | Final version. |