C-CDA Implementation-A-Thon Scenario Information for Example Files

Last Update: 8/19/2019

A new approach will be used to enable more detailed review and comparison of created C-CDA documents across implementers. A patient scenario has been developed that will support creation of sample files at various points in time over the course of the patient's care. This approach builds upon a new practice of engaging communities to develop rich detailed User Stories that demonstrate realistic scenarios and focus solutions on key information that needs to be captured and exchanged.

All Content Creators will have the opportunity to generate a richly populated "longitudinal" CCD. The CCD document will be required to include the Section Time Range entry in at least one section to indicate when information in a section spans a different time range than the time span set for the document in the header. The goal is to gain experience with the new Section Time Range template and increase consistency for its use.

Content Creators also will have the opportunity to generate encounter summaries utilizing the following C-CDA document exchange formats: Referral Note, Progress Note, H&P Note, or Consultation Note. Content Creators who cannot yet generate encounter summaries will have an option to complete the encounter summary exercises using a "encounter based" CCD document that populates the encompassing encounter information in the header (this is the person's medical history as of this encounter). The goal is to expand implementer awareness of the purpose for generating encounter summaries and increase understanding of the difference between in terms of what information needs to be included in the header and body.

The exercises also give Content Creators the opportunity to create a Notes Section or add Note Activity entries to augment the shared information with more narrative notes authored by members of the care team. They will have the opportunity to include a Care Teams Section to include a patient's care team members in the body of the document. The examples will also include health concern and goal information that can be included. The goals is to reinforce the available guidance and expand implementer experience with the use of these templates in C-CDA documents.

The examples provided by Content Creators will be available for all Content Consumers to view or import and attach to the correct patient record within their system. Content Consumers with the ability to consume and reconcile sections of information as narrative or discrete data are encouraged to come prepared to demonstrate this capability. Demonstrating content consumption will be optional for Content Consumers at this C-CDA Implementation-a-thon. An example is included to help implementers explore data reconciliation mechanisms that may be possible through inclusion of persistent instance id's for problems, allergies, and medications. This example also helps implementers explore the use of author and author timestamp information.

General discussions will also be conducted on topics such as narrative text linking and dateTime accuracy and rendering considerations. All of the examples will be useful to these discussions.

Content Creators who are less experienced at creating C-CDA examples are encouraged to try any of the following to get value out of the two required and two optional examples:

1. Attempt to populate the document header for the example file.

2. Populate the header for the example files, included the sections and populate the narrative information you envision would go in each section. Try including a Notes Section and a Care Team Section (narrative only)
3. Populate the header for the example files, include the sections and populate the narrative information you envision would go in each section. Add a few discrete entries where you can. Try adding a coded Care Team Members Organizer or adding a coded Note Activity
4. Clarify your approach for including persistent instance id's for Problems, Medications, and Allergies. Clarify what information will be populated in author and author/time at the entry level. Consider how you would incorporate information provided to your system that included persistent instance id's and author and author/time information.

Proposed C-CDA Examples for Atlanta 2019 C-CDA IAT

Detailed information supplied in the story below should be used in the documented to the extent possible with your system. Other clinical information or care assumptions can be made by participants.

1. REQUIRED. Scene 2 (required for Content Creators). Show creation of a well-formed CCD or H&P document to summarize the patient's history as of the completed visit on 3/5/2018.
    a. If generating a CCD, include an encompassing encounter and include Section Time Range sections to explicitly indicate the time range for data included in each section of the document where the time range differs from the time range set for the document's context in the documentationOf/serviceEvent(@typeCode="PCPR")/effecitveTime/low and /high.
    b. This exercise helps implementers understand the differences between use of the CCD patient summary document template and the H&P encounter summary document template.
2. BONUS. Scene 2 (Optional for Content Creators). Generate the Referral Note to the Endocrinologist created after the 3/15/2019 visit.
3. REQUIRED. Scene 9 (Required for Content Creators). Generated a Progress Note, or H&P, or CCD following the visit with the PCP on February 11, 2019.
    a. Include a care team member section in the body of the document to record relevant care team members involved in the patient's care.
    b. Include a Notes Section and/or Note Activity entries where appropriate.
    c. Include results of a depression screening assessment performed in the office by the nurse who collected vital signs at the beginning of the visit.
        i. Include author and author/time for this test and the result.
4. BONUS. Scene 2, 3 and 9 (Optional for Content Creators)
    a. Precondition work. Assume the CCD or Referral Note generated at the end of Scene 2, as input to Scene 3, was shared with the Endocrinologist in such a way that the Endocrinologist's system could include the identified medications and problems and persist those id's when the referral information was received into the system.
    b. Now assume at the end of Scene 3, the medication list written out after the visit to the Endocrinologist is shared via a Progress Note or Consultation Note or CCD and carries those persisted instance id's where the medication is the same "medication instance" or "problem instance", and different when it is documenting a new medication or problem instance.
    c. Create a Progress Note, Consultation Note, or CCD that would come out of the Endocrinologist's system follow the April 11th visit (output from Scene 3). It is ok to only populate the header and the medication Section information, as a minimum. (this document

will not be judged incomplete due to validation complaints associated with leaving off the other required sections.) The goal is to change the medications regime and add one problem observation.

d. Scene 9: Assume the clinical note document from the Endocrinologist is available for the PCP prior to the February 11th visit. Create the Progress Note or H&P or CCD that is the output from the February 11th visit.

CDex High-Level Patient Story

Time	
	Ted Leven is a 76-year-old male from the southside of Chicago. Ted has a 13-year history of Type 2 diabetes. Ted has no known allergies. He takes a men's multivitamin and he follows the medication regime for his diabetes and other conditions (e.g. hypercholesterolemia). Ted's wife had been an integral part of his care insuring Ted kept up with his skin care, medication schedules and daily blood sugar checks with appropriate insulin corrections. However, Ted's wife passed away in 2012. Ted struggled with the loss of his wife and failed to keep up with the care of his health, in particularly his feet.
2014	Ted experienced a left below knee amputation five years ago (at age 71) due to circulatory complications from his diabetes. Post amputation, Ted was fitted with a prosthetic foot. During initial time of surgery and recovery Ted used a wheelchair and crutches to get around. He continues to rely on them interchangeably to assist in ambulation. .
2018	By this time, Ted's son, John's life had stabilized such that he could step in to assist in Ted's care. John began checking in on Ted periodically throughout the week, taking his father to get groceries, run errands and go to medical appointments. John began checking in on Ted periodically throughout the week, taking his father to get groceries, run errands and go to medical appointments. Balancing his own family and elder care was stressful for John, but he wanted to be a help to his father.
2018	As time passed, Ted's son became increasingly concerned about his father's consistency in testing his blood sugars and overall safety. Several times, Ted was not able to provide specific answers of what his sugars had been and how many units of insulin he had administered to himself. Ted's Endocrinologist increased his Lantus to 14 units every day and changed his short acting insulin (Novolog) dose before meals to 1 unit of insulin for every 8 grams of carbs consumed. The goal/target is to keep his blood glucose level before meals within the range of 6-8 mmol/l, and 2 hours after meal blood glucose level to less than 10mmol/l. Ted was struggling with his medication regimen.
201811	With those increasing concerns, Ted and his family decided that it was time to have Ted move in with John's family so that they could help manage his care more closely. Eventually, Ted moved across town to live with his son. The son lives in a ranch style home with his wife and two

	children. While the home is one level, there is a small rise of stairs to reach the front and back door. John's wife was against Ted smoking in the house so this meant Ted had to give up smoking. .
201901	Soon after the move, John noticed Ted was relying on his wheelchair and crutches more and not wearing his prosthesis. Ted told his son the prosthesis had been bothering him, so he stopped wearing it. John examined his father's leg and noticed open sores on his stump. Ted could not give an exact time as to when the sores first appeared and told his son he didn't tell him because he didn't want to be a bother. He would just wear the prosthesis as much as he could until the pain bothered him so badly that he would just take it off. The son made a doctor appointment with Ted's PCP.
20190211	During that visit the following vital signs were recorded, by the nurse, along with Ted's blood pressure 150/90, weight- 210 lbs, and Height- 5' 10". The system automatically computed Ted's BMI at 30.1. Ted's heart rate (72 bpm) and oxygen saturation (95% on room air) were also measured via pulse oximetry. A blood sugar test was performed and Ted's A1C was 8.1 (up from his previously recorded 7.2). During the physical exam, the doctor found two superficial pressure injuries, measured 1.16 inches (longest point) x 0.9 inch, and 0.8 inch x 0.72 inches. appearing to be caused from the use of the prosthesis. Ted informed his PCP that his last appointment with his endocrinologist was 9 months ago. Since the passing of his wife, he had not attended follow-up appointments with his prosthetist to assess his prosthesis. During that last appointment his plan of care was changed to 14 units of Lantus insulin every morning with a correcting dose of Novolog insulin with meals depending on his blood sugar levels. Ted's son also explained to the doctor that he recently moved his dad into his home due to recent diabetic management issues and Ted's challenges remembering times, dates and dosages of medication. During this visit the PCP asked if Ted had received his seasonal flu shot and was informed that Ted's son had taken him in to the neighborhood Walgreens in October where he received his shot at that time. John also mentioned that Ted had gone for his annual eye exam last April. The PCP updated Ted's chart to include this information in the history of present illness notes.
	The PCP was concerned about the recent changes in Ted's A1C and that he had not been back to the Endocrinologist recently, to follow up with his medication management. The doctor recommended that Ted make an appointment with his Endocrinologist. He also recommended that Ted stop wearing his prothesis until the area heals and to make an appointment with his prosthetist to reassess how his prosthesis was fitting. He also suggested a referral for a home health agency to come in to help with wound care until the ulcers on Ted's stump heal, to monitor his blood pressure and to also conduct an assessment of Ted's new living arrangements. Ted's son agreed the home health services would be helpful.

	The PCP also had Ted make an appointment to come back to see him in a month for reassessment. The home health nurse was requested to report back to the PCP on wound healing progress weekly and to refer patient to see the PCP if the stump wound condition deteriorated.. The PCP did not add a diagnosis of hypertension to Ted's medical record as he suspected Mr. Leven' blood pressure was elevated due to the stress of the appointment and that the blood pressure measurements to be taken in his home setting would likely be more accurate.
	A home health nurse was scheduled to begin visiting Ted starting the next day. The appointment with the Endocrinologist was set for the following week and the appointment with the prosthetist was scheduled for six weeks out.
	The PCP sent clinical information that would be relevant for the Ted's appointments and follow-on care with the Endocrinologist, Prosthetist and home health agency. Each provider received a Referral Note with the reason for the visit and up-to-date information pertinent to caring for Ted. The PCP also sent the visit summary from the most recent visit and a recently updated patient summary document to the home health agency for continuity of care as well. The patient summary provided a summary of Ted's health history and the visit summary included the PCP's clinical note leading to the order for home health services.
20190212	The home health agency developed a preliminary care plan for Ted including short term monitoring of his blood pressure and wound care. A nurse was assigned to begin visiting Ted's home. The home health agency sent the preliminary care plan to Ted's PCP for his approval. Dr. Smith received the request to review, sign, and return the care plan. He completed the task and returned the signed care plan to the home health agency.
20190212	During the first home visit the nurse found that Ted's blood pressure remained high. They cleaned and dressed Ted's wounds, and provided him and his son with wound care information. They also performed an in-home assessment to check for any issues that may represent increased risks for falls, or barriers for Ted's activities of daily living. The home health assessment notes included patient's blood pressure reading (162/92). The nurse documented that it was only 1-2 steps to enter the home. She surmised that everything should be fine for Ted once this episode was addressed. However, she noted that she discussed with Ted and his family that adding a wheelchair ramp may be something to consider for the future.
20190212	Ted's PCP was notified of the blood pressure test results. The PCP also received a copy of the completed home assessment results.
20190213	The next day, the PCP reviewed the information that had been sent in from Ted's home visit, which include progress report on blood pressure, blood glucose levels, and the stump wound condition. During the morning team meeting with his staff, he considered to commence Mr. Leven on anti-hypertensive therapy. Since the patient is already on Lisinopril 10 mg daily for his peripheral arterial disease and his blood pressure remains high. The PCP recommended a combined ACE inhibitor + calcium channel blocker anti-hypertensive therapy to help manage his blood pressures.

	Later that day, the PCP's assistant called Ted to discuss the medication change. Ted talked it over with his son at dinner that evening. They decided adding the medication made sense. The next day Ted called the PCP's office back and talked with the assistant to confirm he would get started on the suggested medication. As per the recommendation of the PCP, the physician assistant updated Ted's chart, adding amlodipine (5 mg per day) to the existing ACE inhibitor medication lisinopril (10 mg per day) for managing his blood pressure. Adding the medication to Ted's chart triggered a prescription to go to Ted's pharmacy. The prescription ordered them to provide a 6-month supply of the medication to Ted. The pharmacy received the medication supply order and dispensed a thirty-day supply for Ted. John picked up the medication on his way home from work the next day (20190214). Ted began taking the Lopressor that day. The pharmacy sent a claim to Ted's health plan (20190215).
20190218	John took Ted to his appointment with the endocrinologist. After hearing about the challenges Ted was experiencing with his medication plan, she revised the plan to simplify things. She raised his Lantus dose to 22 units every day. She also provided with additional educational and information about techniques for better managing his blood sugar levels.
20190212 - 20190326	During his wound recovery, the home health agency assessed ongoing progress for wound healing and checked blood pressure results to see the effects of the new anti-hypertensive medication prescription. After each visit, the nurse sent clinical information back to Ted's PCP to keep him informed of Ted's progress. The report indicated that the stump wounds had healed completely. She also shared this information with Ted's health plan because their care management team offered additional and ongoing support for members who needed assistance managing chronic conditions like diabetes.
20190224	As services were rendered, the PCP, endocrinologist, home health agency, the prosthetist and the pharmacy all submitted claims to Ted's insurance company for the services they provided. The Payer's analytics engine monitored claims and other clinical information to keep member risk profiles up to date. Receipt of the pharmacy claim for the new anti-hypertensive therapy with no record of a diagnosis for hypertension triggered a communication request to Ted's PCP to ask the doctor to provide medication indication within 30 days. The communication request task was accepted by the PCP's EHR system and automatically attached to Ted's chart.
20190301	During the HEDIS hybrid measurement season (January – March) Ted's health plan reviews and gathers information used to submit for the HEDIS/Stars program. Natural language processing on the history of present illness section of incoming clinical records flag Mr. William's PCP visit because it includes information about an Eye exam for a patient with a diagnosis of diabetes who appeared to be non-compliant for a required diabetic eye exam.

	Health plan quality specialists review the record and the narrative note about the eye exam that was completed in the previous year. They use claims records for Mr. Leven during the relevant time range to find the contact information for the patient's ophthalmologist, then they initiate a chart chase request to gather the needed eye exam results.
20190327	Ted followed up with his PCP after 6 weeks. At the follow up appointment Dr. Smith noted the ulcers had healed. He noticed the communication request attached to Ted's chart with a question from Ted's payer to communicate the indication for putting Ted on anti-hypertensives. Dr Smith updated Ted's chart to include the hypertension diagnosis that was being addressed with the anti-hypertensive prescription. The update triggered a communication to go back to Ted's health plan providing a copy of the visit summary. The PCP asked Ted and his son to follow up with him in 6 months and encouraged them to keep up on all Ted's recommended appointments with the endocrinologist, ophthalmologist and podiatrist.
20190402	Ted kept his appointment with the prosthetist and saw the prosthetist soon after the PCP referral was sent. He examined the stump wounds, took measurements of the prosthesis, and advised the patient to return after the wounds had healed completely. On 20190402, Ted returned for assessment as his stump wounds had healed. he prosthetist made some adjustments to the fit of Ted's prothesis.
20190515	Weeks later, the Payer was performing a routine audit of paid claims to confirm that guidelines for medication necessity had been met. Some of Ted's claims were selected for the audit. The Payer requested Ted's medical records from his PCP as well as his Endocrinologist as part of the retrospective audit.

Timeline

https://cdn.knightlab.com/libs/timeline3/latest/embed/index.html?source=1ejJfvlcfFxz2fNvYErYhIVvLNTYEMKMRRwfdLEkvp1k&font=Default&lang=en&initial_zoom=2&height=650

Detailed Narrative and Timeline – Ted Leven

Event	Date	Proposed Content	Synthetic Data
1	Oct (five years previous to current year)	Ted's amputation (left foot, below knee). (Wife died in 2012.) Gets crutches and a wheelchair. Receives a lower limb hinged prosthesis during that year.	
2	Mar 5 (One Year previous	PCP Annual Exam with Dr. John Smith	Following the visit with the PCP, Dr. Smith, an H&P about the visit, or an encounter-

	to current year)		focused CCD from August 20, 2015 to Mar 5, 20 18, was generated.
3	Apr 11	Visit with Endocrinologist	Consultation note or Progress Note generated following the visit. Returned to PCP.
4	Apr15	Dental cleaning	Dental visit note
5	Apr 22	Eye exam	Consultation Note
6	Sep 17	Dental Cleaning	Dental visit note
7	Oct 9	Flu Shot	Records from Walgreens Pharmacy, where shot was administered
8	Nov 14	Moves to live with son.	Note that Ted has a new address now.
9	Feb 11 (Current Year)	Visit with PCP for ulcers on stump.	H&P CCD for HHA Referral Clinical Note to Endocrinology Referral to Home Health Agency
10	Feb 12	Home Health visits for wound care and Blood pressure monitoring begin. Assessment performed at initial visit. Wound size (width, length, depth) and condition were assessed and documented. Lopressor prescribed by PCP	Care plan document Home Health Assessments Prescription filled through Walgreens Pharmacy
	Feb 13	Visit prosthetist – stump wound assessed and measurements of prosthesis. Patient advised to return for prosthesis adjustment after wounds healed completely	Consultation clinical notes and follow-up plan
11	Feb 15	Home Health visit, Wound care, Blood pressure monitoring and Family teaching (including home blood pressure measurement and wound care).	Consultation Clinical Note
12	Feb 18	Visit with Endocrinologist. She increases his Lantus to 22 units every day and changed his insulin dose	

		at meals to 1 unit of insulin for every 8 grams of carbs consumed and updated his insulin correction guide accordingly.	Consultation Clinical Note
13	Feb 19	Home Health visit. Wound assessment and wound care management, and review of patient's home blood pressure and blood sugar measurements.	Progress note
14	Feb 26	Home Health visit as per 2019-02-13..	Progress note
15	Mar 5	Home Health visit. as per 2019-02-13.	Progress note
16	Mar 6	Triggered by receiving Ted's pharmacy claim for Amlodipine (antihypertensive), Ted's Payer's analytics system sends a communication request to Ted's PCP asking him to confirm the indication for prescribing Amlodipine for Ted.	Communication Request or Task asking a Communication Request to be addressed for Ted Leven within 30 days.
17	Mar 12	Home Health visit. as per 2019-02-13.	Progress note
18	Mar 15	Dental Cleaning	Dental visit note
19	Mar 19	Home Health visit. as per 2019-02-13.	Progress note
20	Mar 26	Home Health visit. as per 2019-02-13.	Progress note-close case
21	Mar 27	PCP Follow-up. PCP updates Ted's chart to note the progress against the goal to have Ted's stump wounds completely healed. He also updates Ted's current problem list to include hypertension and this causes the diagnosis confirmation task to complete which sends a notification to the Payer that there is a new communication to be retrieved regarding Ted's problem list.	History and Physical Clinical note (or CCD with encounter information populated if H&P can't be generated) Referral Clinical Note
22	Apr 2	Follow-up visit with Prosthetist for wound assessment and prosthesis fitting/adjustment.	Progress note

23	Sep 30	6-month PCP appointment	History and Physical Clinical note

Synthetic Data

A set of synthetic data files were created to provide clinical content that can be used to test the CDex IG interactions, and to support creation of a reference implementation and validation tools. Synthetic data files were crafted by hand as C-CDA Documents. Additionally, PDF documents were developed to provide realistic clinical data to accompany the scenario.

The synthetic data files are contained in a zip file and are posted on the Confluence Site for the CDex Project.

Care Team Actors – Ted Leven

Care Team Member	Details
Ted Leven Care Team Member Function: Patient	Name: Theodore (Ted) Leven Address 1: 123 State Street Address 2: City: Chicago State: IL Zip: 60601 Cell: 312 123 1234 Common e-mail: TedLeven400@gmail.com Assigning Authority: Direct Trust Direct Address: Ted.Leven@direct.MyPHD.us Birthdate: March 22 1942 Gender: Male Marital status: Widowed Deceased wife Mary Leven (December 5, 1945 – September 6, 2012) Religion: Catholic Race: African-American Ethnicity: Non-Hispanic Employer: Retired from Chicago Transit Authority Care Team Member Function: SCT 116154003 Patient (person) Health Insurance Plan info: Health Insurance Plan: Cigna PPO(62308)/MagellanRx(017449) Details: member=192837465, Group=S63 RxDetails: member=192837465, BIN=017449, PCN=6792000, Group=PRXCBE Advance Directives:

	On File with ADVault National Advance Directives Registry Healthcare Agent: John Leven
John Leven Patient's youngest Son	Name: John Leven Address 1: 123 State Street Address 2: City: Chicago State: IL Zip: 60601 Cell: 312 123 1234 Common e-mail: John.Leven1234@gmail.com Assigning Authority: Direct Trust Direct Address: John.Leven@direct.MyPHD.us Birthdate: 7/4/1974 Gender: Male Marital status: Married Religion: Catholic Race: African-American Ethnicity: Non-Hispanic Employer: Chicago Public Schools Care Team Member Function: SCT 133932002 Caregiver (person)
Elizabeth Johnson Patient's eldest Daughter	Name: Elizabeth Johnson Address 1: 40 West Elm Street Address 2: City: Chicago State: IL Zip: 60601 Cell: 312 333 5432 Common e-mail: LizLJohnson1970@gmail.com Assigning Authority: Direct Trust Direct Address: Elizabeth.L.Johnson.1970@direct.MyPHD.us Birthdate: 9/7/1970 Gender: Female Marital status: Married Religion: Catholic Race: African-American Ethnicity: Non-Hispanic Employer: Walmart Care Team Member Function: SCT 133932002 Caregiver (person)
Patient's PCP starting 5 years ago Care Team Member Function: Primary Care Provider	Name: John Smith, MD NPI: 234599999 Specialty: NUCC 207R00000X Internal Medicine Care Team Member Function: SCT 453231000124104 Primary Care Provider (occupation)

	Address 1: 40 Healthcare Ave. Address 2: Suite 100 City: Chicago State: IL Zip: 60643 Work: 312 222 4321 Assigning Authority: DirectTrust Direct Address: Dr.Smith@direct.JohnSmithMd.com Organization Name: John Smith, MD, LLC Org Address 1: 40 Healthcare Ave. Org Address 2: Suite 100 Org City: Chicago Org State: IL Org Zip: 60643 Org Telecom:312 555 5555 Assigning Authority: DirectTrust Direct Address: Office@direct.VisionCare Assoc.com
Care Team Member Function: Endocrinologist	Name: Elinor Endo, MD NPI: 234567891 Specialty: NUCC 207RE0101X Allopathic & Osteopathic Physicians; Internal Medicine, "Endocrinology, Diabetes & Metabolism" Internal Medicine Care Team Member Function: SCT 61894003 Endocrynologist Address 1: 123 Healthcare Ave. Address 2: City: Chicago State: IL Zip: 60602 Work: 312 222 1234 Assigning Authority: Direct Address: personal Dr.Endo@@direct.EndocrinologyGrp.com Organization Name: Endocrinology Group of Chicago Org Address 1: 123 Healthcare Ave. Org Address 2: Org City: Chicago Org State: IL Org Zip: 60643 Org Telecom:312 222 5555 Org Assigning Authority: Direct Trust Org Direct Address: Office@direct.EndocrinologyGrp.com
Health Plan Disease Manager Care Team Member Function: Disease Manager	Name: Nancy Nurse, RN NPI:223456789 Specialty: NUCC 163WC0400X

NOTE: HIPAA Privacy purpose of use is treatment and operations, based on employer, plan and status of member enrollment in disease management programs.	Nursing Service Providers; Registered Nurse, Case Management Care Team Member Function: SCT 445451001 Nurse Case Manager (occupation) Address 1: 500 East Main Street Address 2: City: Louisville State: KY Zip: 40202 Telecom: 800 486 2020 Assigning Authority: Direct Trust Direct Address: Nurse.Nancy.RN@direct.Cigna.com Organization Name: Cigna Org Address 1: 500 East Main Street Org Address 2: Org City: Louisville Org State: KY Org Zip:40202 Org Telecom: 800 486 2000 Org Assigning Authority: DirectTrust Org Direct Address: Cigna-DM@direct.cigna.com
Home Health Agency Nurse Care Team Member Function: Home Care Nurse	Name: Hanna Homenurse, RN NPI: 1123456789 Specialty: 163W00000X Registered Nurse Care Team Member Function: SCT 445451001 Nurse Case Manager (occupation) Address 1: 500 East Main Street Address 2: City: Louisville State: KY Zip: 40202 Telecom: 800 486 2020 Assigning Authority: Direct Trust Direct Address: HomeRN@direct.HomeNurse.com Organization Name: HomeNurse Org Address 1: 500 East Main Street Org Address 2: Org City: Louisville Org State: KY Org Zip:40202 Org Telecom: 800 486 2000 Org Assigning Authority: Direct Trust Org Direct Address: Office@direct.HomeNurse.com

Podiatrist Care Team Member Function: Podiatrist	Name: Archibald Footster NPI: 232345678 Specialty: NUCC 213E00000X Podiatric Medicine & Surgery Service Providers; Podiatrist Care Team Member: SCT 159034004 Podiatrist (occupation) [Currently not in value set] Address 1: 300 Healthcare Ave. Address 2: Suite 100 City: Chicago State: IL Zip: 60602 Work: 312 222 5678 Assigning Authority: DirectTrust Direct Address: Eaton.Better@direct.PodiatryChicago.com Organization Name: Podiatry of Chicago Org Address 1: 300 Healthcare Ave. Org Address 2: Suite 100 Org City: Chicago Org State: IL Org Zip: 60602 Org Telecom:312 222 1111 Org Assigning Authority: Direct Trust Org Direct Address: CareTeam@direct.PodiatryChicago.com Part of care team but no record of patient visiting Podiatrist.
Ophthalmologist Care Team Member Function: Ophthalmologist	Name: Eileen Seemore NPI: 432765987 Specialty: NUCC 207W00000X Allopathic & Osteopathic Physicians; Ophthalmology Care Team Member Function: SCT 422234006 Ophthalmologist (occupation) Address 1: 900 Healthcare Ave. Address 2: Suite 707 City: Chicago State: IL Zip: 60602 Work: 312 444 3456 Assigning Authority: DirectTrust Direct Address: Eileen.Seemore@direct.VisionCareAssoc.com Organization Name: Vision Care Associates Org Address 1: 900 Healthcare Ave. Org Address 2: Suite 707 Org City: Chicago Org State: IL Org Zip: 60602

	Org Telecom:312 444 2020 Org Assigning Authority: Direct Trust Org Direct Address: VisionCare@direct.VisionCareAssoc.com
Prosthetic Device Center	Name: William Fitter, MD NPI: 456789123 (Would he have an NPI number? Yes Specialty: [Need Code] What would this person's specialty be? Care Team Member: Prosthetist (no code in SCT) Address 1: 100 Care Circle Address 2: City: Chicago State: IL Zip: 60602 Telecom: 312 888 5678 Assigning Authority: DirectTrust Direct Address: BFitter@direct.ComfortCare.com Organization Name: Comfort Care Prosthetics Org Address 1: 500 Care Circle Org Address 2: Org City: Chicago Org State: IL Org Zip: 60602 Org Telecom: 312 888 5000 Org Assigning Authority: Direct Trust Org Direct Address: CareTeam@direct.ComfortCare.com
Pharmacy	Name: CVS Address 1: 123 Main Street City: Chicago State: IL Zip: 60643 Work: 312 211 1111 Org Telecom: 312 555 5555

System Actors

Health Plan Information System	The information processing system used by a Payor which may comprise one or more systems that are integrated to work together.
Practice Management/EHR system for each care provider	The information processing system used by a health care provider such as a PCP, specialist, or home health agency.
Walgreen's Pharmacy	Organization Name: Walgreens Org Address 1: 1005 Main Street Org Address 2: Org City: Chicago

	Org State: IL Org Zip: 60602 Org Telecom: 312 333 7856

Systems that also may be present but are foreshortened out of perspective for this story. The scope of this story does not include digital communication facilitated by third-parties, or digital information sharing with the patient and their caregivers.

Chicago IL HIE	Organization Name: Western IL HIE Org Address 1: 100 Interoperability Way Org Address 2: Org City: Chicago Org State: IL Org Zip: 60602 Org Telecom: 312 333 9876 Assumptions about the version supported for various standards can be applied to explore information exchange challenges that may arise for this storyboard.
HISP systems	Health Information Service Providers are a different kind of system actor from an HIE. They exist to securely transport and deliver health information within the health ecosystem. While Health Information Exchange systems may also provide this transport function, their connections tend to be established via persistent data communication channels developed between organizations that have agreed to share data. They may offer a view and download option, but non-persistent data communication channels are not a part of the HIE design. The functionality of non-persistent data communication is attributed to a HISP system. Some HIEs are beginning to also support HISP functionality.
Trusted Direct e-mail for the Patients and Caregivers.	The hosted e-mail is tied to the person's direst address via the DirectTrust network. Assigning Authority for LOA3 patient addresses is 1.3.6.1.4.1.41179.2.4
Trusted Direct e-mail for the Practitioners and Practitioner Organization processing endpoints.	The hosted e-mail is tied to the person's direst address via the DirectTrust network. Assigning Authority for LOA3 patient addresses is 1.3.6.1.4.1.41179.2.1
ADVault Advance Directives Registry	www.MyDirectives.com

Clinical Content

STARTING DATA: March 5, 2018
H&P following the March 5th visit with PCP.

Payers

<table>
<tr><th>Payers Section</th><th>What Payer Information Needs to be included for the patient for this visit?</th></tr>
<tr><td></td><td>Health Insurance Plan info:

Details: member=, Group=
RxDetails: member=, BIN=, PCN=, Group=</td></tr>
<tr><td>Health Insurance Plan:</td><td>Cigna PPO (62308)
<table>
<tr><th>Member</th><th>Group</th></tr>
<tr><td>192837465</td><td>S63</td></tr>
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<tr><td>Prescription Plan</td><td>MagellanRx (017449)
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<tr><th>Member</th><th>Group</th><th>BIN</th><th>PCN</th></tr>
<tr><td>192837465</td><td>PRXCBE</td><td>017449</td><td>6792000</td></tr>
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<tr><td>Dental</td><td>PayerID: (123123321)
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<tr><td>Vision</td><td>VSP ID: (55667)
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<tr><th>Member</th></tr>
<tr><td>98765</td></tr>
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Advance Directives

Advance Directives Section	Does the patient have Advance Directives? Who is the patient's Healthcare Proxy? Where are the patient's Advance Directives kept?
Where are the Advance Directives recorded:	On File www.MyDirectives.com
Healthcare Agent:	John Leven
Healthcare Agent (first Alternate):	Elizabeth Johnson

Reason for Visit

Reason for Visit Section	
	Annual Wellness Exam

History of Present Illness

History of Present Illness Section	
	Ted Leven is a 75-year-old Caucasian man with long history of type 2 diabetes and amputation of left leg below knee s/p peripheral artery disease 5 years ago. He is here for his annual physical with his adult son. He has no complaints of polyuria or polydipsia. He denies any vision changes. Ted states his blood sugars have not been elevated but he says he sometimes forgets to check his blood sugar every day since his wife passed away.

Chief Complaint

Chief Complaint Section	
Patient Note (51855-5)	No complaints, annual wellness exam

Review of Systems

Review of Systems Section	What problems, symptoms, complaints does the patient say they have or do not have?
	Head and neck: normal CNS: normal GI: normal Genito-urinary: normal Eye: no sign of diabetic retinopathy Cognitive: mini-mental state examination (MMSE) 28/30, no dementia CVS: hypertensive (150/90) Respiratory: chronic cough associated with smoking

Health Concerns

Health Concerns Section	What are the previous concerns (existed prior to this encounter? What are the new concerns (added during this encounter)? What concerns have been removed (removed/completed during this encounter?
Concern #1	Non-compliance with daily blood sugar checks secondary to Wife passing away (caregiver deficit)
Concern #2	Unable to cope with effective self care after loss of wife
Concern #3	Amputation stump wound (secondary to poorly fitting prosthesis)

Past Medical History

Past Medical History	What is the patient's past medical history at this point in time?
	History of left below knee amputation

Problem List

Problem History Section (entries optional)	What are the patient's previous problems (existed prior to this encounter)
Condition #1	Diabetes mellitus type 2 (disorder) SCID: 44054006
Condition #2	Peripheral arterial occlusive disease (disorder) SCID: 399957001
Condition #3	osteorthritis (disorder) SCID: 3723001
Condition #4	Hypercholestolemia

Allergies and Intolerances

Allergies and Intolerances History Section (entries optional)	What are the patient's allergies or intolerances?
Patient Note (51855-5) could be used to document patient reported allergies	No known Allergies

Medication List

Medication History Section	
Medication #1	Atorvastatin 20mg PO daily for peripheral artery disease
Medication #2	Lantus 10 units subcutaneous injection daily for diabetes
Medication #3	Novolog loading does 1 unit for every 8 grams of carbs before meal
Medication #4	Lisinopril 10mg PO daily for peripheral artery disease and
Medication #5	Tylenol 650mg PO Q8hr as needed for osteoarthritis pain
Medication #6 (OTC)	Men’s Multivitamin

Immunizations

Immunizations History Section (entries optional)	What immunizations has this patient received?
10/15/2017	Flu Shot

Test Results

Test Results History Section (entries required)	What tests have been performed on what date, and what were the results?
3/2/2018	Point of Care A1C 7.2
3/2/2018	Fasting blood sugar 285 mg/dl
3/5/2018 - ordered	eGFR

Social History

Social History Section	What is the patient's social history?
Marital Status	Widowed since September 6, 2012
Birth Sex	Male (was this observation originally made by the physician who delivered him on the day of his birth??)
Smoking Status	Current Smoker
Packs per day	1 ppd (20 cigarets /day X 15 years = 15 pack year

Family History

Family History Section	What is the patient's family history?
	No Information

Procedures History

Procedures History Section	What is the patient's history of procedures?
2014	Left leg below knee amputation

Medical Equipment

Medical Equipment Section	What medical equipment does the patient have implanted or use?
Ambulation device	Cane
Ambulation device	Walker
Mobility device	Wheelchair
Vision device	Eye Glasses
Prosthesis	(L5105 CPT HCPCS) Below knee, plastic socket, joints and thigh lacer

Vital Signs

Vital Signs Section	what were the patient's previous set vital sign measurements (include prior date(s)) What time span does this document cover for this section? Is it limited to a certain time interval?
Oxygen saturation by pules ox (2708-6) (translation 59408-5)	95% (on room air)
Heart rate by pulse ox (8867-4) (translation 8889-8)	72 bpm
Weight 29463-7	200 lbs
Height 8302-2	5’ 10 “
Blood Pressure: Diastolic 8462-4 Systolic 8480-6	150/92

Physical Exam

Physical Exam Section	What findings were documented in the Physical Exam performed on the patient during this encounter?
Note (34109-9)	GENERAL: Upon physical examination, the patient was alert, awake and oriented x3 with no apparent distress.
	General: weight- 210 lbs, and Height- 5’ 10”, BMI = 30.1

	Head & neck: no abnormality detected Eye: peripheral or central visual intact, no blurred vision or diplopia, no cataract CVS: no ankle or leg edema, no cramp in thighs and right leg; dorsalis pedis pulse on right foot normal; EKG: sinus rhythm; BP = 150/90 Respiratory: No shortness of breath, no wheezing, chronic cough associated with smoking; SpO2 = 95% on room air; no clubbing of fingers CNS: cranial nerves – grossly intact and no abnormality detected, gait and balance normal, no weakness, no numbness or tingling sensation, patient denies any seizure GI and genito-urinary: no abnormality detected Mental status: PHQ-9 quick depression assessment panel = 5 mildly depressed
Pain Scale	Pain level 5 out of 10 (5/10) – moderate pain associated with *osteorthritis*

General Status Section

General Status Section	What was the practitioner's assessment of the general health status of the patient?
	Patient is alert and oriented as to time and place.
	Patient experiences moderate levels of pain due to *osteoarthritis.*

Mental Status Section

Mental Status Section	What is the mental status of the patient?
PHQ-9 quick depression assessment 44249-1 Total Score 44261-6	PHQ-9 quick depression assessment panel [Reported.PHQ] 5 – mild depression

Nutrition

Nutrition Section	What is the nutritional status of the patient?
	Patient is overweight and does not currently follow a diabetic diet.

Functional Status

Functional Status Section	What is the functional status of the patient?
Functional Status Assessment Note (47420-5)	
	Patient is able to perform activities of daily living.
	Patient experiences some difficulty maintaining medication regime.

Assessment

Assessment Section (The A in SOAP)	What screenings have been done, and what did they show?

	What was the practitioner's assessment? What goals have previously been set for addressing concerns by the patient and/or provider and to what extent is progress being made toward those goals? What goals have been removed/completed by the patient and/or provider?
Note (34109-9)	Patient appears to be mildly depressed. Diabetes is poorly controlled.
Progress Toward Goal observation (for each clinical goal)	N/A Established goals at this visit

Patient Goals

Goals Section	What are the patient's present goals for addressing these problems and concerns?
Patient Goal #1	Check blood sugar daily to keep blood sugar levels under control.
Patient Goal #2	Provide appropriate self-care to enable independent living.

Additional Provider Goals

Additional Provider Goals	What new goals have been set during this encounter for addressing concerns by the patient and/or provider?
Note	Goals reviewed with patient and patient agrees to work toward achieving these goals.

Plan of Treatment

Plan of Treatment Section	For each problem or concern being addressed: What new interventions are being ordered? What planned interventions have previously been ordered and have not yet been completed?
3/5/2018 - referred	Refer to Endochrynologist for management of blood sugar.
3/5/2018 - ordered	eGFR
3/5/2018 – performed/completed	Education Medication Management
3/5/2018 – performed/completed	Education on Skin Self-assessment
3/5/2018 - refused	Education on Smoking cessation – Patient declined
3/5/2018 - ordered	Follow-up PCP progress check in 6 months

Interventions Performed Section

Interventions Performed Section	What planned interventions have been removed/completed? (Include the reason for not performing the intervention or point to the intervention performed listed below.) What interventions were performed during this visit? (interventions performed during this encounter.) What changes need to be made to the patient's medication list?
Education	Medication Management
Education	Skin self-assessment: Assessed patient for ability and readiness to learn. Instructed patient the following: - signs and symptoms of skin breakdown - Potential for skin breakdown on prosthetic pressure areas - Notify provider about localized pain, numbness, tingling or redness. Patient verbalized understanding.

Instructions Section

Instructions Section	Might there be instructions that are just a narrative note? What might they say?
Instruction	Follow a diabetic diet. Don't drink soda.
Instruction	Take medications as prescribed.
Instruction	Follow-up on referral to Endocrinologist.
Instruction	Follow-up on lab tests ordered.
Instruction	Follow-up in 6 months.

Encounter Diagnosis Section

Problems addressed during this visitEncounter Diagnosis Section	What are the Encounter Diagnoses associated with this visit? (hint: Check out the guidance from the Companion Guide on how to represent information that is not yet available.)
3/5/2018	Finalized Encounter Diagnoses are not yet available. (Interim Version of this document. Not yet finalized.)
3/5/2018	Diabetes (Principal)
3/5/2018	Amputation (Secondary)
3/5/2018	PAD (Secondary)
3/5/2018	*Hypercholestolemia* (Secondary)
3/5/2018	*Osteoarthritis* (Secondary)
3/5/2018	*Mild Depression* (Secondary)