Health IT System Requirements for Pharmacists to Document Chronic Care Management Services

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HI+ **Pharmacy Health Information Technology Collaborative**

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1. BACKGROUND/OVERVIEW

In 2015, the Office of the National Coordinator for Health IT (ONC) defined base definitions and certification criteria for US health IT.[1] These base, certification criteria outline the capacity to exchange, integrate, and share electronic health information with other sources during chronic care management (CCM).

The Health Level Seven (HL7) Electronic Health Record (EHR) Functional Model[2] is the basis for the Pharmacist/Pharmacy EHR Functional Profile. Future versions of the HL7 EHR functional model have been developed[3] but not adopted into regulation. For the pharmacy community setting, a document defining required performance criteria is available[4] and is a guide for system vendors to use to develop a pharmacist/pharmacy EHR. Information on the balloted version is available.[5]

Future standards are being developed to streamline EHR programming and implementation. One such HL7 standard framework is Fast Healthcare Interoperability Resources (FHIR®). FHIR leverages web standards with a focus on quick implementation. FHIR is built using a set of modular components called, "Resources," assembled into systems. FHIR is flexible enough to be used in mobile apps, cloud communications, EHR-based data sharing, server communication, and more.[6]

Pharmacy management systems focus mainly on receiving electronic prescriptions, documenting prescription dispensing functions, and exchanging claims-based information. As pharmacists expand their clinically based services such as CCM services, pharmacy management systems need to adopt functionality to effectively collect, document, and exchange clinical information within an EHR.

All healthcare providers must adopt consistent clinical terminology for pharmacy systems to exchange patients' clinical information with other health care providers. With the help of the Pharmacy HIT Collaborative, major national pharmacy associations are working together to define technology-based standardized terminology for pharmacy-based process of care and medication management services.

The Pharmacy HIT Collaborative's professional service documentation and coding work group developed a document, *Guidance to Use SNOMED CT in Documenting Transitions of Care*,[7] that provides an environmental scan of clinical documentation used by pharmacists for transitions of care (ToC), which is a component of CCM.

Pharmacists play an important role in the integrated health care team for managing medication-related issues of patients with chronic care conditions. During health care visits, patients' medication regimens are often adjusted, and pharmacists are in the unique position to assist with these medications as part of managing chronic conditions and during the transition of care from the visit to the next level of care as a component of CCM. With up to 67% of patients admitted to the hospital because of unintended medication discrepancies,[8] it is clear that medication problems during care transitions is a critical issue.

Chronic care management team-based models that include pharmacists use a person-centered approach to help optimize patients' health and medication outcomes. To do this, pharmacists follow a patient care process[9] that includes collecting, assessing, planning, implementing, and following up to ensure patients' meet their individual goals. Pharmacists collaborate with others working on the health care team (which includes the patient and family) and document the patient care and services they provide.

Pharmacists providing patient care services are increasingly participating in new CCM models to ensure continuity of care occurs. Under these new care models and during CCM, pharmacists and members of the care team (which includes the individual, their family, and other caregivers) should

focus on person-centered, coordinated care that includes addressing the patient's goals as well as targeted outcomes of care.

At the time CCM is initiated, the physician responsible for the patient creates a care plan. This care plan is shared with pertinent members of the team, including the pharmacist. The clinical staff delivering monthly CCM services updates the care plan. The National Partnership for Women and Families identified the following key principles as part of the vision for person-centered shared care planning:[10]

1. *Health and care plans should be goal-oriented, dynamic tools (not static documents).*

2. *Tools that facilitate health and care planning should enable all members of the care team to securely access and contribute information, according to their roles.*

3. *Health and care plans should identify and reflect the ability and readiness of an individual (and caregiver) to successfully meet the individual's goals, as well as potential barriers.*

4. *Health and care planning and tools should facilitate decision making and specify accountability.*

5. *Every individual would benefit from health and care planning and tools.*

There is an HL7 electronic standard for exchanging care plans where standard clinical codes (e.g., SNOMED CT) are embedded in the electronic structured care plan document. The standards for a shared, longitudinal care plan for exchange with care providers are described in HL7 Implementation Guide for CDA® Release 2: Consolidated CDA Templates for Clinical Notes (November 2014).[11]

2. PURPOSE

This paper provides guidance to pharmacists regarding the value of working with their pharmacy management system vendors (e.g., system of reference, health IT systems) to encourage the development of health IT functionality to document pharmacist-provided CCM and outcomes.

For the purpose of this paper, a pharmacist care plan includes an active medication list and contains health concerns, interventions, outcomes and patient- specific goals developed in collaboration with the patient and other healthcare providers. The pharmacist will receive a care plan from physicians or case managers and will provide medication-related information pertinent to the overall plan of care for the patient. Pharmacists need to document their patient care services in a pharmacy system that can handle an electronic care plan and have the means to exchange this documentation in an interoperable way.

GOALS

- Encourage vendors of pharmacy systems to create system functionality capable of documenting patient care services and outcomes focused on connecting and exchanging patient information with other healthcare providers and/or systems.

- Identify steps and provide guidance to pharmacists and system vendors to promote the development and use of electronic solutions to document and exchange pharmacist-provided medication-related care plans and monitor chronic conditions.

- Develop value propositions defining the benefits of adopting standards (e.g., HL7, NCPDP).

3. DISCUSSION

Sections 3.1 through 3.4 discuss certain health IT system requirements for using electronic health information exchange to document chronic care management services. To help pharmacists further their understanding of health IT system requirements for HIE, these sections focus on ONC health IT certification, transition care management, certification examples for outpatient pharmacy for TCM and CCM, and person-centered use cases.

3.1   GUIDANCE ON ONC HEALTH IT CERTIFICATION

In 2015, ONC released certification guidance for health IT technology developers serving health care providers, including pharmacists. ONC is in the process of updating the HIT Certification Program by adding U.S. Core Data for Interoperability (USCDI) and moving away from regulating the data and identifying information or applications for clinical information exchange using API Resource Collection in Health (ARCH). ARCH includes resources to share care plans using HL7 FHIR.[12,13]

The US Core Data For Interoperability (USCDI v1)

Assessment and Plan of Treatment

Care Team Members

Clinical Notes
- Consultation Note
- Discharge Summary Note
- History & Physical
- Imaging Narrative
- Laboratory Report Narrative
- Pathology Report Narrative
- Procedure Note
- Progress Note

Goals
- Patient Goals

Health Concerns

Immunizations

Medications
- Medications
- Medication Allergies

Patient Demographics
- First Name
- Last Name
- Previous Name
- Middle Name (incl. middle initial)
- Suffix
- Birth Sex
- Date of Birth
- Race
- Ethnicity
- Preferred Language
- Address
- Phone Number

Problems

Procedures

Provenance
- Author
- Author Time Stamp
- Author Organization

Smoking Status

Unique Device Identifier(s) for a Patient's Implantable Device(s)

Laboratory
- Tests
- Values/Results

Vital Signs
- Diastolic BP
- Systolic BP
- Body height
- Body weight
- Heart Rate
- Body temperature
- Pulse oximetry
- Inhaled oxygen concentration
- BMI percentile per age and sex for youth 2-20
- Weights for age per length and sex
- Occipital-frontal circumference for children >3 years old

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What is the API Resource Collection in Health (ARCH)?

Goal · Patient · Care Plan · Procedure · Condition · Medication · Immunization · Diagnostic Report · Document Reference · Allergy Intolerance · Device · Provenance · Observation · Medication Order · Medication Statement

The ARCH
15 Specific FHIR Resources
Aligned to support the USCDI
Referenced in new 170.315(g)(10) certification criterion

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3.2   EXAMPLES OF SHARING MEDICATION-RELATED eCARE PLANS

The Pharmacy HIT Collaborative supports developing a pharmacist-provided medication-related electronic care plan to share functional assessments and person-centered goals of care to meet CMS alternative and value-based payment models for chronic care management. This will help pharmacists be part of required documentation around the use of the team-based current procedural terminology (CPT) code 99490, for non-face-to-face care coordination services furnished to Medicare beneficiaries with multiple chronic conditions.

A comprehensive care plan for all health issues typically includes, but is not limited to, the following elements:

- *problem list*

- *expected outcome and prognosis*

- *measurable treatment goals*

- *symptom management*

- *planned interventions and identification of the individuals responsible for each intervention*

- *medication management*

- *community/social services ordered*

- *a description of how services of agencies and specialists outside the practice will be directed/coordinated*

- *schedule for periodic review and, when applicable, revision of the care plan*[16]

Part of the certified EHR or other technology requirement is the creation of a "patient-centered care plan based on a physical, mental, cognitive, psychosocial, functional and environmental (re)assessment and an inventory of resources (a comprehensive care plan for all health issues, with particular focus on the chronic conditions being managed)."[17] Sharing of the care plan as appropriate with other practitioners and providers of the care team is important. Depending on the CCM program, the physician or case manager is responsible for coordinating care plans from all providers. The electronic platform for sharing electronic care plans should follow standards for interoperability. It must at least electronically capture care plan information; make this information available on a 24/7 basis to all practitioners within the practice whose time counts towards the time requirement for the practice to bill the CCM code; and share care plan information electronically, or by fax, as appropriate with other practitioners and providers.[18]

eCARE PLAN USE CASES FOR PHARMACISTS
The National Council for Prescription Drug Programs (NCPDP) Pharmacy Professional Services Work Group identified the following four use cases related to a pharmacist electronic care plan.[19]

> *USE CASE 1*
>
> *The pharmacist meets with the patient and their caregiver after a recent discharge from a hospital for a pulmonary embolism. The patient is diagnosed with hypertension and diabetes. The patient is enrolled in diabetes and anticoagulation OP clinics. The pharmacist coordinates MTM services (including reconciliation of medications, allergies, and indications for medication use) with the primary care provider (PCP) and the diabetes and anticoagulation clinics on patient's medication-related goals. The pharmacist uses their health IT system to document patient care. The health IT system is then used to generate the Pharmacist*

Care Plan to share the patient/caregiver agreed medication related goals and electronically exchanges the Care Plan with the patient's personal EHR, PCP EHR, and the OP clinics for chronic care management and care coordination.

USE CASE 2

Patient is scheduled for a hip replacement. The pharmacist, under a collaborative practice agreement which extends pharmacists' services beyond their scope of practice with the orthopedic surgeon, counsels the patient prior to the procedure to assure there are no medication-related problems. After the surgery, the pharmacist coordinates medication-related goals with the patient pertaining to deep vein thrombosis risk and pain management. The community pharmacist uses their health IT system to document patient care. The health IT system is then used to generate the Pharmacist Care Plan to share the patient/caregiver agreed medication-related goals and electronically exchanges the Care Plan with the patient's personal EHR, orthopedic surgeon's EHR, PCP EHR, the home health care agency, and rehabilitation center EHR for care coordination.

USE CASE 3

A patient with behavior health issues and multiple chronic diseases meets with their consultant pharmacist for their yearly comprehensive medication review to meet their Medicare Part D MTM requirement. The pharmacist documents conflicting treatment strategies and medications. The pharmacist recommends strategies/alterations to existing treatment, development of a manageable medication schedule, patient education, and outcome follow-up with the physician(s) responsible for the patient's care. The pharmacist uses their health IT system to document patient care. Before the health IT system generates the Pharmacist Care Plan, the pharmacist resolves any disparities in recommendations with the physician. Then the Pharmacist Care Plan is shared with the patient/caregiver agreed medication related goals and electronically exchanges the Care Plan with the patient's personal EHR, psychiatrist's EHR, OP psychiatric clinic EHR, PCP EHR, for chronic care management and care coordination.

USE CASE 4

A patient comes to the community pharmacy to pick up hydrocodone, which has been e-prescribed, and complains of constipation. After the pharmacist reviewed the state's prescription Drug Monitoring Program database, the pharmacist discovered that multiple physicians have treated the patient for pain. The pharmacist suspects the patient may have an opioid abuse condition. Through patient counseling, the pharmacist discovers the patient is malnourished, has three chronic care conditions, complains of constipation, and has no primary care provider but is seeing multiple physicians. The pharmacist performs comprehensive medication review and helps the patient identify a PCP. The pharmacist documents conflicting treatment strategies and medications including the need for naloxone. The pharmacist recommends strategies/alterations to existing treatment, pain management, development of a manageable medication schedule, nutritional counseling, patient education and outcome follow-up. The community pharmacist uses their health IT system to document patient care. The health IT system is then used to generate the Pharmacist Care Plan to share the patient/caregiver agreed medication related goals and electronically refers the patient for nutritional counseling and exchanges the care plan with the patient's personal EHR, new PCP EHR, nutritionist EHR, other physician's EHR treating the patient, out patient drug rehabilitation center EHR; for chronic care management and care coordination.

As an illustration of the use cases above, the Consolidated Clinical Document Architecture (C-CDA)

and HL7 structured document template, the *Care Plan Exchange Proof of Concept* project demonstrates information related to eCare Plans for Disease/Case Management including payers. The short YouTube video (https://www.youtube.com/watch?v=CkIElDKrBWI) will help you understand the project. The project also demonstrated how eCare Plans can be linked to make the data imbedded in the eCare Plan more usable to providers. Another good website to understand the how to integrate the eCare Plan in pharmacy practice is the eCare Plan Initiative https://www.ecareplaninitiative.com/.

For more technical information about eCare Plans HL7 FHIR R4 Resource CarePlan Content page (source: https://www.hl7.org/fhir/careplan.html) website project:[20,21]

The Standardized Care Plan Document Exchange Proof of Concept Project was the third step in a series of initiatives undertaken to address requirements for exchanging care plan information. The proof of concept project was initiated to confirm the usefulness and feasibility of those recommendations. The primary objective was to engage implementers in trial use of the C-CDA Care Plan Document in order to contribute careful evaluation that would lead to clear and specific refinements to help mature this emerging interoperability specification. A secondary objective was to initiate industry collaboration needed to establish value sets for encoding the different kinds and types of care plans, the patient enrollment statuses in a care plan, and other structured data that does not have industry-accepted code lists to convey machine processable information needed in care plans. A team representing payer, provider and vendor stakeholders came together to gain hands-on experience with this new standard, and to assess the utility of the new care plan document. The care plan Proof of Concept Project accomplished the following:

- *Revealed implementation strategies that lowered the technical challenges for implementing CDA document exchange.*

- *Identified high value approaches to improve sharing care plan information.*

- *Helped prioritize the list of issues to report as Data Standard Trial Use (DSTU) Comments against the HL7 C-CDA R2.1 Care Plan Document template and to clarify the recommendations to propose as the needed resolution.*

To initiate the project, 19 key requirements were identified and prioritized. Examples include: support the information needed for collaboration across the care team; offer the ability to track a patient's enrollment in a Case Management/Disease Management program; and provide the ability to track the status of the care plan content, including each care team member's acceptance of the plan. Contextual information was developed to illustrate the creation of digital care plan documents and other types of CDA documents during the cycle of care over time and in support of the provided use case scenario. Eight care plan sketches were created to illustrate how the new care plan document templates could be used to meet the envisioned use case/user story provided for this project.

The newly, defined Care Plan Document template was added to the C-CDA standard. The template establishes a care plan document as a consensus-driven dynamic plan that represents a patient's, and his or her care team's prioritized concerns, goals, and planned interventions. It serves as a blueprint for a care plan that is shared by all care team members (including the patient, the caregivers, and providers) to guide the patient's care. The design for the new care plan document integrates multiple interventions proposed by multiple providers across disciplines for multiple conditions. A care plan document represents one or more care plans and serves to reconcile and resolve conflicts between the various care plans developed for a specific patient by different providers. While a care plan includes the patient's life goals and requires care team members (including the patient) to prioritize goals and interventions, the reconciliation process becomes more complex as the number of care plans increases. The care plan document also supports longitudinal coordination of care.

The care plan topic supports the Care Provision Domain Message Information Model (D-MIM). The care plan D-MIM is a specification of the Care Statement with a focus on defined acts in a guideline. The transformation of those acts occur when the selected acts are added within an individualized care plan. The purpose of the care plan, as defined upon acceptance of the DSTU materials in 2007, is:

- To define the management action plans for the various conditions (for example problems, diagnosis health concerns) identified for the target of care.

- To organize a care plan and check for completion by all individual professions and/or responsible parties (including the patient, caregiver or family) for decision making, communication, and continuity and coordination.

- To communicate explicitly by documenting and planning actions and goals.

- To permit the monitoring, flagging, evaluating and feedback of the status of goals, actions, and outcomes such as completed, or unperformed activities and unmet goals and/or unmet outcomes for later follow up.

- To manage risk related to effectuating the care plan.

3.3   CHRONIC CARE MANAGEMENT (CCM): AN OVERVIEW FOR PHARMACISTS

In March 2017, the American Pharmacist Association (APhA), in collaboration with the DeliMarva Foundation and Health Quality Innovators, published *Chronic Care Management (CCM): An Overview for Pharmacists*[22] to provide a summary of the many resources related to CCM requirements for documenting and billing services to CMS by qualified providers under the Medicare Physician Fee Schedule. The guide outlines health IT needs to collect, document, and to exchange clinical information to demonstrate the value of pharmacists involved in CCM.

Although pharmacists are not eligible to bill CMS directly for these services, "CCM serves as an ideal opportunity for pharmacists to form collaborative and contractual partnerships with qualified health care professions (QHPs) to provide CCM services that are within their scope of practice."[25] The guide provides an example CCM business model for pharmacists and collaborating prescribers.

If pharmacists participate in such partnerships, it will be important for them to understand the CMS requirements pertaining to documentation for CCM services and how the information is shared between systems.

A pharmacy EHR system could receive C-CDA documents with sections available to pharmacists so they can view, use and can reconcile the data. How the pharmacy EHR system performs these functions is proprietary to the system vendor.

3.3.1   OPERATIONAL FUNCTIONS OF CCM VERSUS TCM

CCM services continually follow a patient with two or more chronic conditions, while TCM is episodic, following a patient who is transitioning from one care setting to another. For pharmacists engaged in CCM as part of a care team, following a patient's needs through care management for awareness of patients who have converted into TCM. Pharmacists need to be aware that TCM service and CCM service are not allowed to overlap or to be provided to patients concurrently. CCM is documented by the calendar month and TCM is documented for the 30-day period post-discharge.[22]

3.4 CERTIFICATION EXAMPLE FOR AMBULATORY CARE PHARMACY FOR CCM

The protocol outlined in the next section is an example for pharmacists to discuss with system vendors about how to utilize the health IT certification process within the ambulatory pharmacy setting. For the purpose of this paper, an ambulatory setting includes community pharmacy settings, outpatient clinics, or any setting where the patient is not in a hospital or facility. When speaking with a system vendor the pharmacist should identify the receiving entity (the ambulatory pharmacy health IT system) and they should communicate with the sending entity hospital EHR system using secure transport specifications.[24] The receiving entity (the outpatient pharmacy system) should have the ability to read or integrate the electronic structured document (e.g., eCare Plan template).
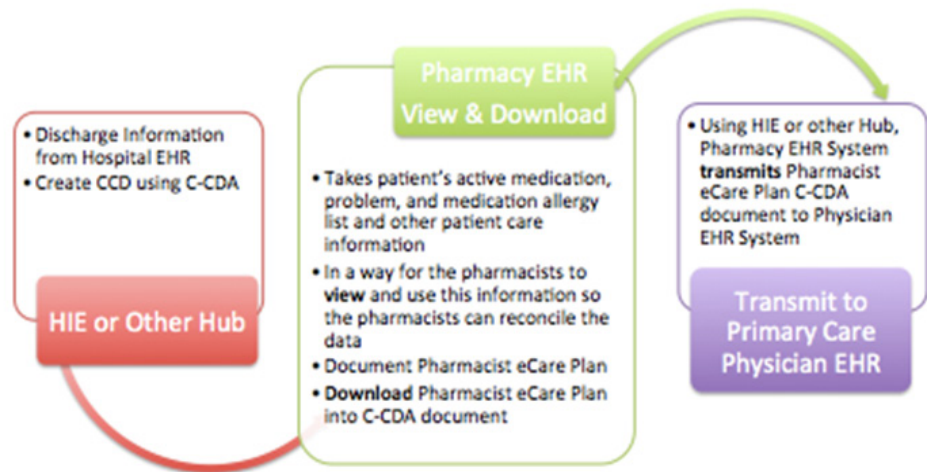
The ambulatory pharmacy system needs the capability to communicate with a receiving entity in order to send clinical information contained in a C-CDA[25] outlined in the scenario in the next section (3.4.1).

3.4.1 COLLECT, DOCUMENT, AND EXCHANGE FOR TCM AND/OR CCM SCENARIO

A component of the certification criteria requires health IT functionality to view, download, and transmit a C-CDA between two entities (a sending and receiving entity).[26,27] In a scenario where a patient moves from a hospital to a community home based care for TCM and CCM, the receiving entity—the community pharmacy Health IT system—needs to make the data contained in C-CDA viewable and downloadable for the community pharmacists. How the community pharmacy health IT system consumes and views the data (user interface) is proprietary to the system vendor. The community pharmacist reconciles the data and documents in the pharmacist eCare plan.

The reconciled data is contained in a C-CDA version of the pharmacist eCare plan. The community pharmacy EHR system is then ready to forward the C-CDA version of the Pharmacist eCare Plan via transmission to any other EHR system needing the Pharmacist eCare Plan.

Scenario: View, Download, and Transmit a Community Pharmacist eCare Plan to a Primary Care Physician

- Discharge Information from Hospital EHR
- Create CCD using C-CDA

HIE or Other Hub

Pharmacy EHR View & Download

- Takes patient's active medication, problem, and medication allergy list and other patient care information
- In a way for the pharmacists to **view** and use this information so the pharmacists can reconcile the data
- Document Pharmacist eCare Plan
- **Download** Pharmacist eCare Plan into C-CDA document

- Using HIE or other Hub, Pharmacy EHR System **transmits** Pharmacist eCare Plan C-CDA document to Physician EHR System

Transmit to Primary Care Physician EHR

3.4.2   PERSON-CENTERED LONGITUDINAL USE CASE

This section outlines a person-centered longitudinal use case, including the use of a care plan for CCM, and behavioral health integration (BHI) services. For the purpose of this use case, the term "CCM Pharmacist" refers to the pharmacist performing CCM as a service and does not denote a practice setting or type of pharmacist.

After Transition from Hospital to CCM eCare Plan

The pharmacist providing CCM coordinates with home health, the patient, the patient's family, providers, and the ambulatory pharmacist to identify all of the medications, vitamins and supplements the patient is currently taking. The names of medications, the indication, route, dose, frequency, directions, and the last dose taken are documented in the patient's electronic health record. Drug allergies and adverse drug reactions are also collected.

History and Physical

74-year-old Hispanic female admitted with diagnosis of severe hypoglycemia and falls. Prior to hospital, patient was living at home.

Allergies and adverse reactions

- No known allergies
- No adverse reactions

Problem list on admission

- Diabetes Mellitus: Type 2
- Osteoporosis
- Anxiety
- Hypertension
- Dyslipidemia
- Urinary tract infection

Admission medication list

- Metformin 1000 mg tablets twice daily – DM Type 2. Last dose taken 2/5/15 am
- Glipizide 10 mg twice daily – DM Type 2. Last dose taken 2/5/15 am
- Sulfamethoxazole/trimethoprim DS 1tab twice daily – UTI. Last dose taken 2/5/15 am
- Lisinopril 5mg daily – Hypertension. Last dose taken 2/5/15
- Atorvastatin 20mg at bedtime – Dyslipidemia. Last dose taken 2/4/15
- Lorazepam 1 mg QID for anxiety and sleep. Last dose taken 2/5/15 (12 noon)

It is understood that standardized terminology codes (RxNorm for medication description, ICD10 for diagnosis, SNOMED CT for clinical terms, and LOINC for laboratory findings and vital signs) will be identified in the systems programming.

The pharmacist works with the patient care team to resolve drug therapy problems for continuation of appropriate home medications during hospitalization.

Drug therapy problems

Health concerns/interventions

74-year-old Hispanic female admitted with diagnosis of severe hypoglycemia and falls. Prior to hospital, patient was living at home.

Allergies and adverse reactions

- **Drug not safe due to drug interaction:** sulfamethoxazole/trimethoprim and glipizide. Increased hypoglycemic effect of glipizide. Sulfamethoxazole/trimethoprim will be discontinued, as infection is resolved.

- **Dose too high:** Hold glipizide and then restart at a lower dose after the sulfamethoxazole/trimethoprim therapy is completed. Use rapid acting insulin for coverage if needed.

- **Needs additional therapy:** Aspirin should be started due to cardiovascular risk factors.

- **Untreated condition:** osteoporosis. Plan to defer therapy to outpatient CCM pharmacist.

BHI Drug therapy problems

BHI Health Concerns/Interventions

- **Drug not safe for patient:** Plan to decrease lorazepam and start sertraline.*

BHI drug therapy problems, such as listed above, need to be identified in the system for separate billing from CCM. This example is to demonstrate how systems need to identify different drug therapy problems depending on billing requirements.[28]

The patient's condition stabilizes and discharge planning begins.

The hospital pharmacist completes medication reconciliation upon discharge and works with the hospital team to ensure appropriate discharge medication orders.

The hospital pharmacist collaborates with the patient and health care provider team to develop the discharge care plan. This plan includes the patient's new home medication list and the patient-centered, medication-related goals.

The hospital pharmacist educates the patient on the new home medication list and home-going instructions for what medications to stop taking (sulfamethoxazole/trimethoprim), what medications to start taking (aspirin and sertraline), and what medications to change (slowly begin lorazepam taper and decrease glipizide).

The patient's care plan and medication information are also provided to the home health care team.

Upon discharge from the hospital, the patient enters into a TCM program, and then after 30 days is able to be enrolled into a CCM program.

Admission medication list	Discharge medication list
• Metformin 1000 mg twice daily • Glipizide 10 mg twice daily • Sulfamethoxazole/trimethoprim DS 1 twice daily • Lisinopril 5mg daily • Atorvastatin 20mg at bedtime • Lorazepam 1 mg QID for anxiety and sleep	• Metformin 1000 mg twice daily • Glipizide 5mg twice daily • Lisinopril 5mg daily • Aspirin 81 mg daily • Atorvastatin 20mg at bedtime • Lorazepam 0.5mg TID and 1 mg at bedtime for anxiety and sleep • Sertraline 25mg daily • Rapid acting insulin sliding scale

The Hospital Pharmacist Proving TCM Coordinates with Home Health Care

The hospital pharmacist performing TCM ensures all appropriate appointments, assessments, and laboratory orders related to medication management are coordinated and documented in a medication-related care plan, preferably in an electronic form (e.g., pharmacist eCare plan).

The hospital pharmacist provides the community pharmacist the patient's discharge care plan and medication list. The hospital pharmacist collaborates with the community pharmacist to ensure all medications are available for the patient.

The Chronic Care Management (CCM) Pharmacist

The patient will have an appointment with a CCM pharmacist in 30 days to follow up on medication changes and to discuss the possibility of starting osteoporosis therapy. The pharmacist eCare plan includes the medication list, and the patient brings all medications to this appointment. The CCM pharmacist decision making relates to the ambulatory care of the patient that was discharged.

The pharmacist evaluates all lab work and vital signs to determine the most safe and effective therapy for each of the patient's conditions and recommends the following lab work as it relates to the patient's diabetes, hypertension, and elevated lipid profile. The CCM pharmacist recommendations are evidence-based and made upon review of the patient's clinical conditions, lab results, and vital signs.

Allergies: No known drug allergies				
Health Conditions	Current Therapy	Prescriber	Chronic Care Management Plan	Treatment Goals
Diabetes	Metformin 1000 mg bid	Tom Sullivan, MD	Resolve elevated A1C if > 7	A1C < 7
	Glipizide 5mg bid	Tom Sullivan, MD	Order an A1C	
	Rapid acting insulin sliding scale	Tom Sullivan, MD		
CAD prevention	Aspirin 81 mg daily	Nina Patel, CNP		
Dyslipidemia	Atorvastatin 20mg daily	Nina Patel, CNP	Order a lipid profile	LDL < 100
Hypertension	Lisinopril 5mg daily	Nina Patel, CNP	Resolve elevated BP	BP < 135/80
Anxiety/Sleep	Lorazepam 0.5mg TID	Nina Patel, CNP	Suggest converting lorazepam therapy from scheduled to PRN	
	Lorazepan 1 mg at HS	Nina Patel, CNP		
	Sertraline 25mg daily	Nina Patel, CNP		
Osteoporosis	None		Consider if bisphosphonate therapy is appropriate	Prevent fracture. Recent hospital admission s/p fall secondary to severe hypoglycemia
Suitability of ongoing treatments				Order CMP

Prescriber Information	Address	Phone	Fax
Tom Sullivan, MD	5247 East End, Howell, NJ 07731	800-457-8563	800-457-8555
Nina Patel, CNP	13 Treemill Rd, Lakewood NJ 08701	444-365-1112	

Goal patient wants to meet

The patient's specific goal is to make dietary/nutritional life-style changes and increase physical activity to 30 minutes per day for next 30 days (taking Sundays off each week). She has been counseled and plans to utilize all medication recommendations. The patient's specific goals is shared with the care team.

Visit Date	Time Spent	Follow-Up
	20 minutes	1 month

Interoperability between the pharmacist's EHR, the PCP's EHR, and the hospital's EHR provides the pharmacist access to all pertinent patient records. In this example, the pharmacist is able to provide best practice recommendations as a result of having access to the patient's information and supporting evidence. EHR interoperability enables comprehensive evaluation of current and past therapies, including treatment failures, to guide therapeutic intervention opportunities.

4. CONCLUSION

EHR certification requires system functionality capable of documenting TCM/CCM services and outcomes focused on connecting and exchanging patient information with other health care providers and/or IT systems. EHR certification is critical to documenting and sharing, in a certified standard way, appropriate drug therapies for monitoring patient treatment.

This document supports identification of electronic methods to exchange pharmacist-provided care plans. Pharmacists are encouraged to use this document to facilitate the process with their EHR vendors to obtain EHR certification for the exchange of clinical information between pharmacists' documentation system and other EHR systems. Effective and efficient exchange of medication-related EHR data serves to improve the quality of patient care as it relates to CCM.

The general perception appears to be that without access to clinical information, and pharmacists unable to work with the information within their workflow, patients suffer. The benefits of pharmacists having access to clinical information include time savings, more streamlined communication (e.g., telephone and fax), ability to serve more patients, and improved patient care.

Information recorded in the patient's current medical records and transmitted to health care providers in an organized, accepted format is extremely valuable in the development of appropriate drug therapies and in the monitoring of the patient's response to treatment. Such involvement and oversight on the part of the pharmacist can aid in driving positive outcomes, including safety of the patient's medication treatment plans through a variety of methods. Being able to improve patient care, attract additional patients and providers, and use this information in contract negotiations serves as the motivation to pursue the adoption of appropriate EHR certification. Pharmacists, in serving the best interests of the patient's medication-related health care, can effectively use the exchange of EHR data to provide optimal patient care.

5. RESOURCES AND REFERENCES

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LIST OF HL7 STANDARDS – EHR PROFILES

http://www.hl7.org/implement/standards/product_section.cfm?section=4&ref=nav

HL7 EHR PHARMACIST/PHARMACY PROVIDER FUNCTIONAL PROFILE

The Pharmacist/Pharmacy Provider Functional Profile will facilitate EHR systems' capture of medi-
cation- and clinical-related data at the point of contact or point of care by specifying the functional
requirements needed to support messaging among prescribers, pharmacist, and pharmacy provid-
ers and other health care entities needing medication-related information. These standards provide
functional models and profiles that enable the constructs for management of electronic health
records.

- HL7 EHR Pharmac   www.hl7.org/document-
  center/private/standards/ehr/Functional_Profiles/HL7_EHRRXPROVFP_R1_2012MAR.zip

- *HL7 EHR-System for a Pharmacist/Pharmacy EHR: Implementation Guide for Community
  Practice* (offered as is; HL7 endorsement pending). http://www.hl7.org/documentcenter/
  public/standards/informative/13-294_HITSbook_HL7_Web.pdf

ONC RESOURCES

- Certification Guidance for EHR Technology Developers Serving Health Care Providers Inel-
  igible for Medicare and Medicaid EHR Incentive Payments. http://www.healthit.gov/sites/
  default/files/generalcertexchangeguidance_final_9-9-13.pdf

- ONC HIT Certification Program, Overview for 2014. http://www.healthit.gov/policy-research-
  ers-implementers/onc-hit-certification-program.

- Certified Health IT Product List (CHPL) provides the authoritative, comprehensive listing of
  certified Complete EHRs and EHR Module(s). http://oncchpl.force.com/ehrcert?q=chpl

- Certification Programs and Policy: The ONC Certification Program provides a defined pro-
  cess to ensure that EHR technologies meet the standards and certification criteria adopt-
  ed by the Secretary of Health and Human Services (HHS) to help providers and hospitals
  achieve MU objectives and measures established by CMS. http://www.healthit.gov/poli-
  cy-researchers-implementers/certification-programs-policy.

- 2014 Edition Testing and Certification. http://www.healthit.gov/policy-researchers-implementers/2014-edition-testing-and-certification

  - Test Method Overview: ONC, in collaboration with the National Institute of Standards and Technology, developed the functional and conformance testing requirements, test cases, and test tools for the testing and certification of EHRs to the certification criteria adopted by the HHS Secretary.

  - By adopting certified EHR technology and attesting to MU, eligible professionals, eligible hospitals, and critical access hospitals are eligible to receive incentive payments through the CMS EHR incentive programs.

- CMS CCM document ICN909433 December 2016

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