Longitudinal Plan of Care to Support Care Coordination: Current State in USA

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Overview

• Longitudinal Plan of Care Definition (LPOC) and assumptions
• Gaps in standards to support use of plan of care for care coordination
• Evaluation of current state of LPOC to support care coordination in US
Longitudinal Plan of Care (LPOC)

- A single, integrated plan that is patient-centered, reflects patient’s values and preferences.
  - Engages all team members, (including patient/family caregivers) in development and reconciliation.
  - Supports achievement of patient goals along the continuum of care.
  - Facilitates cohesive transitions in care.
**A LPOC to Support Broad Approaches to Care Coordination**

**Goal: Coordinated Care**

**Mechanisms**
*Means of achieving goal*

**Broad Approaches**
*Groups of activities/tools to support coordination*

**Coordination Activities**
*Actions to support coordination*

- **Teamwork**
- **Health Care Home**
- **Care Management**
- **Medication Management**
- **Health IT-Enabled Coordination**

- **Establish Accountability/Negotiate Responsibility**
- **Communicate**
- **Facilitate Transitions**
- **Assess Needs and Goals**
- **Create a Proactive Plan of Care**
  - Monitor, Follow Up, and Respond to Change
  - Support Self-Management Goals
  - Link to Community Resources
  - Align Resources with Patient & Population Needs

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LPOC and Care Coordination: Assumptions

• To truly support care coordination, the LPOC must be communicated and reconciled across care transitions.

• A LPOC comprised of structured data could provide:
  – Communication platform to support the AHRQ “Broad Approaches”.
  – Means to measure coordination activities and the effect of these activities on patient self-management goals and outcomes.
Gaps in Standards to Support use of LPOC for Care Coordination in USA

• Plan of care standards are poorly defined.
  – Minimal data elements included in the early stages of Meaningful Use (MU),
    • MU requirements focus on acute and primary care settings
  – Many of the LPOC data requirements that could truly improve communication across transitions are proposed for a future stage of MU.

Data Requirements: MU Plan of Care (POC) vs. LPOC

Meaningful Use POC Requirements + the following:
- Patient preferences
- Follow-up plans re: to goals
- Tests pending
- Follow-up care
- Orders for treatments/interventions
- Self-management plan

LPOC

- Problems
- Goals
- Instructions
- Responsible clinicians
Methods

• Focus-style group interviews in four healthcare settings: emergency department (ED), acute care hospital (ACH), skilled nursing facility (SNF), and home health agency (HHA)

• Clinicians from 24 healthcare settings within six geographic regions in six focus groups (n = 30).

• Interviews were transcribed and open-coded using a priori codes based on the AHRQ Care Coordination Measurement domains.

• Two-person consensus approach used to identify POC content related to the Broad Approaches to Care Coordination.
Results: POC content related to the Broad Approaches to Care Coordination

• POC is used within each of the Broad Approaches but practices exist in silos.
• LPOC is a vision, but generally does not exist in practice.
  – Processes exist to support generation and update of POC within a setting.
  – Patient engagement related to the POC is minimal.
  – POC content is not systematically reconciled across settings.
Results: POC and Teamwork Focused on Care Coordination

• Midwestern ACH: “The NP and social worker start the plan (in web-based care management tracking system), and then they bring an initial one to the team conference, where the patient is presented and discussed, and then they fine tune and add to the drafted care. So at the team conference with the pharmacist, mental health, and geriatrician, they all input at that point in time. Typically throughout the week, the geriatrician, mental health, and pharmacist do not access that. But the nurse practitioner and social worker then use that tool as an ongoing way to track implementation and the weekly team conference and review provides a kind of accountability and problem solving. If something’s not getting done, how come, and how can we move forward consistent with the person’s goals.”
Results: POC and Patient Activation/Engagement

• Southeast SNF Current state: “…whole care team goes room to room and kind of rounds, this is more outside the patient room, in a conference room where we team round on every single patient and then the case manager does review the care plan with the patient following each team meeting.”

• SNF Ideal future state: “It could be great if we could somehow project it (POC) in the patient’s room on the T.V. screen so they could actually see it and read it. A lot of adults learn better that way, visually, and kind of see what their goals were and have that opportunity to really engage and say no, I don’t really think I can ambulate fifty feet by Friday, how about we start with thirty, or maybe, I think I can do a hundred feet can we push it up.”
Results: POC and Medication/Care Management Across Settings

• Northwest ACH: “Current state is when the family has a paper copy of their care plan; they are instructed to take it with them to any medical facility they visit. What future state would be is for them to identify ‘I have a care plan’ and that whoever, the pediatrician or the emergency room would be able to access that electronically.”

• West ACH: “Current state is that we have a patient plan of care in the inpatient and when the patient gets transferred to a SNF or a home care, then we have another application within XXX (EHR system)—California and southern California do not use the same one.”

• Northwest HHA: “There is not one home for any unified care plan. There are many sub care plans. There are many care plans with homes, but there is not one unified care plan across the system.”
Results: POC and Health-IT Enabled Care Management

- New England HHC: “That has a lot of things like telephone triaging, really looking at the patient and determining their specific goals. One of their goals may be to stay out of the hospital. There’s a lot of those things, however none of it is really software driven, meaning the software doesn’t have the logic to help with the decision making to help the clinician with any specific care plan or interventions or anything like that.”

- New England SNF: In response to metrics related to POC, “We’re thinking about how we even do it...We have no IT infrastructure to support that. It will be some floor case manager whose job it will be to live with the patient in XXX (facility name) and be the glue.”
Results: Communication of the POC to Medical home

• Northwest ED: “But the other piece that you were asking as far as communicating with the medical home, this is a big challenge for the ER with our current medical documentation is that when we discharge patients from the ER we don’t routinely call their primary care providers and the office of the primary care provider receives a very rudimentary fax that basically just says your patient was here. Often they have little knowledge of what went on in the ER, what our thought process was, what we did for the patient, and it’s a rare circumstance that they get a lot of information and most providers don’t have access to our medical records.”
Use of POC to Support Broad Approaches to Care Coordination

• While LPOC is a common vision, was not noted in practice outside of research settings.
  – Patients’ role in POC development/update was generally peripheral.
  – Health IT tools to support POC generation were used within a setting.
  – We did not see functionality to support POC reconciliation across settings.
Conclusion

- Strategies are needed to transform the LPOC from vision to reality.
  - Tools to support patient activation/ownership
  - Practices/processes to ensure POC documentation is systematically shared across settings.
  - Standards/tools/processes to facilitate POC reconciliation across settings.

\[\text{\red x} = \text{Current Gaps}\]
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Member, HIT Policy Committee
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Summary Results: Overall Assessment of Current Status in U.S. Leaders

- EHRs of today do not support many of the key needs of practices especially those focusing on enabling team care
- Tremendous evolution underway today in how these processes are being managed
- Even leaders did report some best practices
- Many minor issues with EHRs of today which can be addressed soon
  - But is an area in which great additional change will occur
Key Functions of EHRs for Care Coordination

- Reconciling medications
- Tracking laboratory tests
- Communicating across settings
- Mediating care plans between disciplines

O’Malley et al, Center for Studying Health System Change
Other Key Activities in Care Coordination

- Referrals
- Consultations
- Care transitions
Stages of Meaningful Use

Improving Outcomes

Stage 1: Data capture and patient access
- 2011-13

Stage 2: Information exchange and care coordination
- 2014-15

Stage 3: Improved outcomes
- 2016-17

Stage 3: Improved outcomes
Focus of Stage 3 Meaningful Use Criteria

Care Coordination Criteria

- Medication Reconciliation
- Summary of Care Record Exchange
- Referral Report Exchange
Medication Reconciliation

- Applies to transitions of care (receiving a patient from another setting of care or provider of care or believes an encounter is relevant)
- Stage 2: Reconcile medications for >50% of transitions of care
- Stage 3:
  - Reconcile medications for >50% of transitions of care
  - Reconcile medication allergies for >10% of transitions of care
  - Reconcile problems for >10% of transitions of care
Summary Care Record Exchange

- Applies to (1) transitions of care and (2) referrals to another site of care or provider of care
- Stage 2: SCR exchange for 50%; electronic SCR exchange for 10%
- Stage 3:
  - SCR exchange for 65%; electronic SCR exchange for 30%
  - For transitions of site of care, SCR must include all four of the following; for referrals, just the first
  - Concise narrative in support of care transitions (free text that captures current care synopsis and expectations for transitions and/or referral)
  - Setting-specific goals
  - Instructions for care during transition and for 48 hours afterwards
  - Care team members, including primary care provider and caregiver name, role and contact info
Referral Report Exchange

- Stage 2: None
- Stage 3:
  - EP to whom a patient is referred acknowledges receipt of external information and provides referral results to the requesting provider, thereby beginning to close the loop.
  - For patients referred during an EHR reporting period, referral results generated from the EHR, 50% are returned to the requestor and 10% of those are returned electronically*
    - Specific interest in assessing return of test results
Stage 3 Care Coordination Measures from a PCP Perspective

- For referrals,
- PART 1: Send an SCR that includes a concise narrative in support of care transitions (free text that captures current care synopsis and expectations for transitions and/or referral) for 65% of patients referred and 30% electronically
  - In PCP control
- PART 2: Receive referral reports for 50% of patients referred and 10% electronically (including test results).
  - Depends on specialist
Patient-Centered Medical Home and HIT

7 Major areas:
- Clinical Decision Support
- Registries
- Team Care
- Personal Health Records
- Care Transitions
- Telehealth
- Measurement

Conclusions

- EHRs today do not support needed care coordination activities well
  - Enormous variation in processes among practices
- Doing well in this area broadly will be central to improving efficiency, safety, quality
- Early meaningful use just barely get started
  - Do not yet address—care plan, team communication, registry-type tools
- Critical area for further research
Care Transitions: Challenges and Opportunities in Clinical Informatics

Care Transitions: Challenges and Opportunities for Medication Reconciliation

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This study was funded by the European Union funding instrument for Regional Developments in Finland S12138/2012
Content

• The methods and tools as well as results of a regional development project aiming to improve coordination of patients’ medication management
Transition in ICT use

Public health
- Cybermedicine
- Self care
- Prevention and self help

Clinical medicine
- Telemedicine
- Ambulatory medicine
- Hospital medicine
- Assisted care
- Disease management

Consumer health informatics
Provider oriented medical informatics

Focus of traditional medical informatics
Focus of new medical informatics

Information age health care
Industrial age medicine

Eysenbach 2001
Patient care transition tools at discharge

Mykkänen 2011
What was known before

• The growing number of citizens living at home with severe or mild health problems has created challenges for managing their medication reconciliation
• Various tools for medication reconciliation are used in care transitions
• Information flow is fragmented across healthcare settings
• Various actors – professionals and lay people administer medication
• Reported AEs of medication orders, prescription confusions as well as missing regimens
• Development activities done at organization or unit level
• Focus on palliative care
What we did and how

• A regional development project was carried out in 2012 – 2013
• The aims were to survey the best practices and aggregate knowledge for further development
• The approach method was an interview study (15 persons based on invitation) in November 2012
• Summit meeting (42 persons, open call to participate) at end of the January 2013
• Recommendations for future developments in June 2013
What we did and how...

• The interviews provided us a comprehensive picture about the current practices and future plans of the participating organizations.
• The Summit meeting proved to be an effective means for gathering various actors together to look for solutions of improved practices.
• The participants had group discussions which were instructed and guided by a mentor and two key notes to facilitate thinking and discussions.
What was stated at the end of the Summit

• Medication information did not reach all professionals or lay people due to different electronic patient’s record systems and tools
• The work processes differed a lot
• This situation was hard for everyone and it was regarded as a remarkable risk for patient safety

-> no news but important to state at regional level
-> the Summit offered an objective ground for planning further co-operation
How to continue: Key themes

• Multi-professional collaboration

• Specification and agreement on operational models, based on needs assessment of patient / client groups

• Specification and agreement of roles and responsibilities in medication reconciliation and management, based on individual assessment in relation to medication management tasks

• Development of new and improved tools and interoperability solutions to support the needs above

• Specific actions, tools and operational models to support medication management at home by both patients themselves and professionals in home care, including skills and reminders

• Improving training in medication administration and documentation skills for professionals, including medication and substance know-how, supervisory skills, multiprofessional teamwork and new tools
Specific proposed actions on regional level

1. Development of services to support "coping with medication" at home and by patients themselves
   - e.g. assessment of citizens’ abilities in relation to medication tasks, easy access to medication advice, reminders, early identification of adverse events

2. Operational models and defined responsibilities to support medication management in care transitions
   - e.g. ”early check routines” in admissions, discharges

3. Multi-level medication (and med information) checks for different phases of care process and for different actors
Specific proposed actions on regional level

4. Information management services and tools to support the above operational models on regional level
   – potential of Patient Health Record-based personal medication cards, medication administration tools, access to medication orders and lists through National Electronic Patient Record services

5. Development of skills and education
   – Concepts, understandability, education of best practices and operational models, low threshold knowledge services, encouragement and rewards for education participation, etc.

6. Selection or development of quality criteria and indicators for all of the above.
Conclusion

• Motivation to improve collaboration
• Knowledge sharing through networks
• Models and tools available
• A new development study about to start in next January!
Thank you!

Current Capabilities of Health Information Technology to Support Care Transitions

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HIT for Care Transitions

• HIT should support care coordination and care transitions.

• Successful implementation in these areas could lead to significant gains in patient safety and lower costs.

• Currently, there is little data about using EHRs for care transitions across healthcare settings in the United States.
HIT for Care Transitions

• In 2011, we wrote a white paper for the National Quality Forum (NQF) where we summarized the data needs, current capabilities, barriers and approaches to using HIT for care transitions.
  – We found that data on current capabilities was lacking.

• In 2012, we conducted a second project for NQF where we endeavored to collect data about current capabilities, and to put this information into a framework.
Methods

• Focus group style interviews with clinicians from four healthcare settings: emergency department (ED), acute care hospital (ACH), skilled nursing facility (SNF), and home health agency (HHA)
• Clinicians from 24 healthcare settings within six geographic regions in six focus groups (n = 30).
• The interviews were transcribed and coded by a two-person consensus approach to identify content related to the specific coordination activities.
**HIT for Specific Coordination Activities**

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HIT for Communication

• Communication includes both interpersonal communication and information transfer.
• HIT is common for interpersonal communication.
  – Often occurs through email rather than secure messaging within the EHR
• Lack of interoperability precludes information transfer.
  – Only one region has a regional health information network.
  – Often, clinicians at the receiving site have been granted read-only access to the EHR of the sending site.
Lack of Electronic Information Transfer

• Southeastern U.S. Home Health Agency:

• “Well, for us at homecare, within our own system and from other referring hospitals, we do get a call, you know, some sort of a handoff or an electronic communication with some basic information, but then we go and build a referral out of the systems... We go and look in a variety of systems: the system that most of the hospital discharge planners are using, our medication administration and order entry system, and we can also look in our outpatient system... So, like they said, we have access to it but we then build this referral and put it into our own homecare system.”
Lack of Electronic Information Transfer

- Midwestern U.S. Skilled Nursing Facility:
- “I don’t think we have any great programs where we connect our hospital service with our nursing homes. We do try to call if we do not have enough information... For patients who are coming from [two hospitals], we do have a computer available at least at a couple of our facilities where we can log in and really extract information from the medical records. It is very time consuming, logging in some days is not that great or internet issues and all that. So if I’m only gonna be in the facility for two hours that day and I have two admissions to do, just the hassle of getting logged on and going through all the hoops of security [is a barrier].”
Paper copies of records

• With the exception of Interview 6, all of the sites described barriers to interoperability.
• Paper records are faxed or hand-carried via ambulance personnel.
• Interview 6 is a large integrated delivery system with almost all patients cared for in-network and a shared EHR. However, the same problems exist for patients transferred from outside facilities.
Limited use of HIT for patient-centered coordination activities

• Patient-centered care coordination activities:
  • assessing needs and goals
  • creating a proactive plan of care
  • responding to change
  • supporting self-management goals

• Clinicians rarely use HIT with the patient in order to perform these activities.
HIT for Assessing Needs and Goals

• National integrated delivery system, Information Systems representative:

• “From the national team perspective, what I would add is that with our new care planning functionality in the inpatient world... **we have a field where nurses will be entering, “what is the patient’s goal for today?”** So we’re really getting to that patient engagement piece and it will be a discrete field so we can extract it for data mining. So that will be specifically “What is the patient’s goal” and as I mentioned, the patient profile will be able to go across the continuum, so we’re getting closer to being able to see the patient’s story.”
Emphasis on Aligning Resources with Patient and Population Needs

• Interview 2 – a point and click algorithm that results in a risk score and, if high, the clinicians develop a transition of care plan.

• Interview 4 – a paper-based risk assessment tool is used by the HHA to calculate a score that then is manually entered into their EHR.

• Interview 5 – an email is triggered by the hospital’s EHR when a medically complex child is admitted by the institution.

• Interview 6 – an electronic tool to calculate the LACE risk score that using data from the EHR along with some manual input.
Emphasis on Aligning Resources with Patient Needs

• National integrated delivery system, Acute Care Hospital:

• “Some of our regions are using the LACE tool, and we’ve integrated that in our electronic medical records... depending on the score on the LACE, they get different things. So for example, a patient with a 16 and above might get a palliative care referral or screening.”
Conclusion

• HIT is used to some extent for all of the specific care coordination activities, but HIT tools are typically used within one healthcare setting rather than bridging transitions across settings.

• There has been little innovation in HIT for patient-centered care coordination activities.

• HIT has been used to identify high-risk patients.
Extra slides
Patient-Centered Care Across Transitions: Challenges and Opportunities in Clinical Informatics

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Learning Objectives

• The attendee will identify aspects of medication reconciliation across care transitions that contribute to patient harm
• The attendee will be able to summarize the challenges of using EHRs for care transitions across healthcare settings
• The attendee will be able to define the longitudinal plan of care and differentiate the concept from a discipline-specific plan of care
• The attendee will be able to summarize policy regarding data standards to support care transitions in the US
• The attendee will be familiar with the results of research on health information exchange in the United States and Finland, as well as contributions from other attendees.
HIT to Establish Accountability

• One site has a web based care management and care planning tracking system which is reviewed weekly to establish accountability
HIT to Establish Accountability

• Midwestern ACH:

• “We developed a web based care management and care planning tracking system. The nurse practitioner (NP) and social worker (SW) go in and identify protocols that apply to the particular individual ... And the other advantage ... was being able to track its implementation over time ... So at the team conference with the pharmacist, mental health, and geriatrician, they all provide input ... the NP and SW then use that tool as an ongoing way to track implementation and the weekly team conference and review provides a kind of accountability and problem solving. If something’s not getting done, how come? And how can we move forward consistent with the person’s goals.”