Meeting Etiquette

• PLEASE NOTE: All participants on this call are muted. If you want to ask questions or make comments please use the “Chat” feature on the web meeting.

TO CHAT, click on the “chat” bubble at the top of the meeting window.

• Select “All Panelists” to send your message in order to ensure the comments are addressed publically.
• Introduction
  – Lauren Thompson – ONC Office of Standards & Technology

• Background of LCC Initiative
  – Evelyn Gallego – ONC S&I LCC Initiative Coordinator

• Accomplishments
  – Jennie Harvell – U.S Dept. of Health and Human Services, ASPE

• Key Deliverable 1: LCC Transitions of Care Use Case 1.0
  – Terry O’Malley – Partners HealthCare System, Inc.

• Key Deliverable 2: Care Plan White Paper/Glossary
  – Jennie Harvell – U.S. Dept. of Health and Human Services, ASPE

• Key Deliverable 3: LCC Care Plan Exchange Use Case 2.0
  – Jennie Harvell – U.S. Dept. of Health and Human Services, ASPE

• Key Deliverable 4: C-CDA R2 Implementation Guidance
  – Michael Tushan – Lantana

• Pilots
  – Tom Moore – Healthix

• Real World Applications
  – Michael Tushan – Lantana
  – Gordon Raup – Datuit
  – Andrey Ostrovsky, MD – Care at Hand

• Path Forward
  – Evelyn Gallego – Initiative Coordinator
Introduction

Lauren Thompson
Director for the Standards and Interoperability (S&I) Division of the Office of Science and Technology (OST)
Value of LTPAC Health Information Exchange

- ONC recognizes the role HIE plays in helping health care providers share health information in a timely and secure manner across care settings to support.
- Although LTPAC Providers are not eligible for incentive payments under Meaningful Use program, ONC initiated several programs to promote HIE in LTPAC settings:
  - HIE Challenge Grants for LTPAC Transitions of Care
  - Beacon Community Grants
  - S&I Longitudinal Coordination of Care (LCC) Initiative
  - ONC LTPAC and Behavioral Health Certification Program
Role of Standards in supporting LTPAC HIE

• “Care” is evolving and dynamic
  ▪ Requires more robust information for effective transitions and care planning
• As population ages and number of individuals with complex conditions increases, we have an increased need in LTPAC Services
  ▪ Requires ability to gather and share LTPAC information electronically
• LTPAC services cover wide arrange of services—from institutional services in specialty hospitals and nursing homes, to a variety of home and community based services
  ▪ Standards need to transverse across variety of settings and multi-disciplinary providers
Background

Evelyn Gallego, MBA, CPHIMS
S&l LCC Initiative Coordinator
ONC Office of Standards & Technology
Longitudinal Coordination of Care (LCC) Initiative: Background

• Initiated in October 2011 as a community-led initiative with multiple public and private sector partners, each committed to overcoming interoperability challenges in long-term, post-acute care (LTPAC) transitions
  ▪ Addressed limitations in standards identified to meet Stage 1 and Stage 2 Meaningful Use (MU) Transitions of Care (ToC) requirements
  ▪ Driven by work of Gesinger Keystone Beacon Project, MA IMPACT Project and ASPE sponsored HIE and Home Health Plan of Care Initiatives

• Initiative focused on advancing interoperable health information exchange (HIE) on behalf of LTPAC stakeholders and promoted LCC on behalf of medically-complex and/or functionally impaired persons
  ▪ Looked beyond provider and patient populations targeted by the MU Program
LCC Scope Statement

• To define the necessary requirements that will drive the identification and harmonization of standards that will support and advance patient-centric interoperable health information exchange, including care plan exchange, for medically complex and/or functionally impaired individuals across multiple settings.
LCC Scope Activities

• To identify and validate a standards-based longitudinal care management framework built around the needs and experience of the patient respective to:
  ▪ The Patient Assessment Summary (PAS) or LTPAC Summary document leveraging the CMS Minimum Data Set (MDS), Outcome and Assessment Information Set (OASIS) and Care Tool datasets
  ▪ A more robust Transition of Care (ToC) dataset required by Care Team “receivers” building off the S&I ToC dataset
  ▪ The Care Plan/Plan of Care documents used to coordinate patient care across multiple settings and disciplines
LCC Scope Activities

- Activities supported via 5 sub-workgroups (SWGs):
  - **Longitudinal Care Plan (LCP):** completed SEP2013
  - **LTPAC Care Transition (LTPAC):** completed SEP2013
  - **HL7 Tiger Team:** completed AUG2013
  - **Patient Assessment Summary (PAS):** completed JAN2013
  - **Pilots:** completed SEP2014
LCC Workgroups Structure

**COMMUNITY-LED INITIATIVE**

**Longitudinal Coordination of Care Workgroup**

- **Longitudinal Care Plan SWG**
  - Completed in 2013
  - Identified standards for Care Plan exchange

- **LTPAC Care Transition SWG**
  - Identified data elements for long-term and post-acute care (LTPAC) information exchange using a single standard for LTPAC transfer summaries

- **HL7 Tiger Team SWG**
  - Ensured alignment of LCC Care Plan activities with related HL7 Care Plan standardization activities

- **Patient Assessment Summary (PAS SWG)**
  - Identified standards for the exchange of patient assessment summary documents

**Pilots WG**

- Validation and testing of LCC WG identified Standards
LCC Timeline in Brief

- Oct 2011: Initiative Kickoff
- Jun 2012: LCC Use Case 1.0
- Jun 2012: Balloted Functional Status, Cognitive Status & Pressure Ulcer Templates for C-CDA
- Aug 2012: Published Care Plan Whitepaper
- Dec 2012: Published Care Plan Glossary
- Jan 2013: Balloted LTPAC Assessment Summary Document and Questionnaire Assessment IG
- Jan 2013: Stage 3 MU Recommendations
- Jun 2013: LCC Use Case 2.0
- Aug 2013: Balloted C-CDA Release 2
- Sept 2013 to Sept 2014: Pilots Execution
Relevant Prior Work

- S&I Framework Transitions of Care (ToC) Initiative
- HL7 Patient Care WG
- ASPE-sponsored worked on HIT standards for LTPAC
- AHIMA LTPAC Health IT Collaborative
- ONC Challenge Grant Program
- ONC Beacon Community Program
- IHE Patient Care Coordination Technical Committee
- HIMSS HealthStory
LCC Stakeholder Engagement

102 Total Members

- 59 Committed
- 43 Other Interested Party

- Educational
- Government: Federal, State, Local
- Provider Associations: Medical, Physician etc.
- Health Information Exchanges
- Health IT Vendors (EHR, EMR, PHR, HIE)
- Health Professionals (DO, MD, DDS, RN, Tech)
- Healthcare IT
- Foundations
- Home Care and Hospice
- Licensing/Certification Organizations
- Managed Care Organizations
- Provider Organizations
- Research Organizations
- Standards Development Organizations
- Technology Hosting and Compliance
- Consultants/Contractors
Accomplishments

Jennie Harvell
U.S. Dept. of Health and Human Services
Office of the Assistant Secretary for Planning and Evaluation
Patient Assessment Summary SWG

- Led by ASPE and Keystone Beacon Community Project
- Validated clinically relevant subset of MDS and OASIS data elements useful to exchange at times of ToC and for instances of shared care
- Supported and advanced with HL7 refinements to C-CDA for interoperable exchange of functional status, cognitive status, and pressure ulcer
  - Functional Status and Cognitive Status included in MU2 Final Rule
- Created a crosswalk of data from CMS assessments (i.e., MDS, OASIS, and CARE) and ToC data sets from the Beacon Community Affinity Group and the Massachusetts IMPACT program
Patient Assessment Summary SWG (cont’d)

• Collaborated with CMS, HL7 and Lantana to develop and ballot an implementation guide that identifies LOINC codes for CARE assessment content and represent these items in a CDA format.
• Collaborated with the Keystone Beacon Community, HL7, and Lantana to develop and ballot the [HL7 Implementation Guide for CDA® Release 2: Long-Term Post-Acute Care Summary, DSTU Release 1 (US Realm)](http://www.hl7.org) to support the interoperable exchange of summary MDS and OASIS content across Nursing Homes and Home Health Agencies
  • The IG leverages the CCD template in the C-CDA standard
  • Monitored Keystone Beacon Community testing and implementation of new standards
LTPAC Care Transition SWG

- Led by Improving Massachusetts Post-Acute Care Transitions (IMPACT) Project
- Developed a priority list of acute/post-acute transitions based on volume, clinical instability and acuity
- Developed and published LCC Use Case 1.0
- Identified standard clinical content defined by the receiving clinicians for all high-priority transitions
LTPAC Transitions SWG (cont’d)

- In collaboration with the Longitudinal Care Plan SWG, and working with public and private partners in the development and balloting of the HL7 Implementation Guide for CDA® Release 2: Consolidated CDA Templates for Clinical Notes (US Realm) Draft Standard for Trial Use, Release 2 (Sept 2013) which provides new templates and requirements for the HL7 C- CDA standard for the exchange of data elements for:
  - consult note, summary note, transfer note and care plan/home health plan of care
Longitudinal Care Plan SWG

• Led by ASPE
• Developed and Published Care Plan White Paper
• Developed Care Plan Glossary
  ▪ Informed LCC response to HITPC Request For Comment on Meaningful Use Stage 3
  ▪ Informed LCC Use Case 2.0
• Prepared and submitted LCC recommendations for MU3 and 2015 EHR Certification Criteria
• Developed LCC Use Case 2.0
  ▪ Outlined functional requirements and technical specifications for Care Plan and Home Health Plan of Care exchange
• Supported the development and balloting of new Care Plan document type revisions to C-CDA
LCC HL7 Tiger Team

• Led by S&I. Formed to resolve differences and promote alignment of LCC and HL7 artifacts that address and support exchange of care plans

• Submitted comments on the informative ballot of the HL7 Version 3 Standard: Service Oriented Architecture Care Coordination Service (CCS), R1.

• Collaborated with the HL7 Patient Care Workgroup Care Plan Project and provided recommendations on the Care Plan domain analysis model prior to its’ release for HL7 balloting.
  • A majority of the recommendations made by the LCC HL7 Tiger Team were implemented in the ballot document
Stage 3 Meaningful Use

• S&I LCC Workgroup recommended MU3 Program incorporate the following requirements for the use of interoperable clinical content, standards, and implementation guides to support transitions of care and care planning:
  ▪ LCC identified data sets for consult note, summary note, transfer note – supported by the HL7 C-CDAR2.0
  ▪ LCC identified and defined care plan/home health plan of care content - supported by the HL7 C-CDAR2.0

• HITPC MU3 Final Recommendations to ONC in April 2014 include:
  ▪ Additional data elements to support ToC: Transfers of care, Consult (referral) request, and Consult Result Note
  ▪ New Summary of Care Components to align with Care Plan Components: patient goals, problem specific goals, patient instructions/ interventions, care team members
LCC Key Deliverable 1: LCC Transitions of Care Use Case 1.0

Terry O’Malley, MD
Partners HealthCare System, Inc

Larry Garber, MD
Reliant Medical Group
Use Case 1.0: Background

Current State: 2011

- MU1 Transitions of Care (ToC) Data Set CCD
  - 175 Data Elements
  - Developed for Hospital to PCP transitions
- Missing (among many other data elements and concepts)
  - Functional Status
  - Cognitive Status
  - Skin/Wound
  - LTPAC Site specific information
- Initial S&I proposal
  - Limit focus to exchanges between LTPAC sites and patient/family
### 11x11 Sender to Receiver Grid. Old Scope in Green

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Use Case 1.0: New Improved Roadmap

- Little benefit from those exchanges
- Instead, exchange information from LTPAC providers to Acute Care Hospitals:
  - In-patient floor
  - ED
  - Outpatient testing and treatment sites
- Exchange information from Acute Care Hospital units to LTPAC providers and patient/family
- Include PCMH in LTPAC
- Plan for C-CDA
- Expand MU1 Transition of Care CCD Elements
Prioritize Transitions by Volume, Clinical Instability and Time-Value of Information

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Black circles = highest priority
Green circles = high priority
Output

- Published June 2012
- New LTPAC Data Set
  - More than 50 changes made to the initial draft data set
  - Resulted in 325 data elements (vs 175)
  - Included requirements of all essential role groups in all sites for all priority transitions
- Included Data elements that were:
  - Missing from the C-CDA
  - Incomplete

http://confluence.siframework.org/download/attachments/34963728/SIFramework_LCC_UC.docx?api=v2
Additional Contributor Input

National
- American College of Physicians
- NY’s eMOLST
- Multi-State/Multi-Vendor EHR/HIE Interoperability Workgroup
- Substance Abuse, Mental Health Services Agency (SAMHSA)
- Administration for Community Living (ACL)
- Aging Disability Resource Centers (ADRC)
- National Council for Community Behavioral Healthcare
- National Association for Homecare and Hospice (NAHC)
- Longitudinal Coordination of Care Work Group (ONC S&I Framework)
- Transfer of Care & CCD/CDA Consolidation Initiatives (ONC’s S&I)
- Electronic Submission of Medical Documentation (esMD) (ONC S&I)
- ONC Beacon Communities and LTPAC Workgroups
- Assistant Secretary for Planning and Evaluation (ASPE) and Geisinger: Standardizing MDS and OASIS
- Centers for Medicare & Medicaid Services (CMS)(MDS/OASIS/IRF-PAI/CARE)
- DoD and VA: working to specify Home Health Plan of Care dataset
- AHIMA LTPAC HIT Collaborative
- HIMSS: Continuity of Care Model
- INTERACT (Interventions to Reduce Acute Care Transfers)
- Transfer Forms from Ohio, Rhode Island, New York, and New Jersey
Five Transition Datasets

1. **Report from Outpatient testing**, treatment, or procedure
2. **Referral to Outpatient testing**, treatment, or procedure (including for transport)
3. **Shared Care Encounter Summary** (Office Visit, Consultation Summary, Return from the ED to the referring facility)
4. **Consultation Request** Clinical Summary (Referral to a consultant or the ED)
5. Permanent or long-term **Transfer of Care Summary** to a different facility or care team or Home Health Agency
Five Transition Datasets

Shared Care Encounter Summary
(AKA Consult Note):
- Office Visit to PHR
- Consultant to PCP
- ED to PCP, SNF, etc…

Consultation Request:
- PCP to Consultant
- PCP, SNF, etc… to ED

Transfer of Care Summary:
- Hospital to SNF, PCP, HHA, etc…
- SNF, PCP, etc… to HHA
- PCP to new PCP
Baseline Use Case Transactions

Scenario 1: Transitions of Care and Referral

Representative Transitions

1. Acute Care to LTPAC (as represented by HHA) #5:
2. LTPAC (as represented by SNF/ NF) to ED #4
3. ED to LTPAC (as represented by SNF/ NF) #3

Scenario 2 –Patient Communications:

4. Copy all ToC and PoC transactions to patient/care giver PHR

Scenario 3 – HHA Plan of Care:

5. Initial PoC from HHA to Physician, Physician to HHA
6. Ongoing PoC from HHA to Physician, Physician to HHA
7. Recertification PoC from HHA to Physician, Physician to HHA
Datasets include Care Plan

Shared Care Encounter Summary (AKA Consult Note):
- Office Visit to PHR
- Consultant to PCP
- ED to PCP, SNF, etc...

Consultation Request:
- PCP to Consultant
- PCP, SNF, etc… to ED

Transfer of Care Summary:
- Hospital to SNF, PCP, HHA, etc…
- SNF, PCP, etc… to HHA
- PCP to new PCP

Home Health Plan of Care
- Anticoagulation
- CHF
Patients are evaluated with assessments (history, symptoms, physical exam, testing, etc...) to determine their status.
Patient Status helps define the patient's current conditions, concerns, and risks for conditions
Risks/concerns come from many sources
Goals for treatment of health conditions and prevention of concerns are created collaboratively with patient taking into account their statuses and Care Plan Decision Modifiers.
Care Plan Decision Modifiers

- Patient/family preferences (values, priorities, wishes, adv directives, expectations, etc...)
- Patient situation (access to care, support, resources, setting, transportation, etc...)

Decision making is enhanced with evidence based medicine, clinical practice guidelines, and other medical knowledge.
Interventions and actions to achieve goals are identified collaboratively with patient taking into account their values, situation, statuses, risks & benefits, etc...
The Care Plan is comprised of Modifiers, Conditions/Concerns, their Goals, Interventions/Actions/Instructions, Assessments and the Care Team members that actualize it.
Interventions and actions achieve outcomes that make progress towards goals, cause interventions to be modified, and change health conditions.
The Care Plan (Concerns, Goals, Interventions, and Care Team), along with Risk Factors and Decision Modifiers, iteratively evolve over time.
A many-to-many-to-many relationship exists between
Health Conditions/Concerns, Goals and Interventions/Actions
Care Plan Decision Modifiers
- Patient/family preferences (values, priorities, wishes, advance directives, expectations, etc…)
- Patient situation (access to care, support, resources, setting, transportation, etc…)
- Patient allergies/intolerances

Care Team Members each have their own responsibilities

Health Conditions/Concerns
- Active Problems
- Risks/Concerns: Wellness, Barriers, Injury (e.g. falls), Illness (e.g. ulcers, cancer, stroke, hypoglycemia, hepatitis, diarrhea, depression, etc…)

Goals
- Desired outcomes and milestones
- Readiness
- Prognosis
- Related Conditions
- Related Interventions
- Progress

Patient Status
- Functional
- Cognitive
- Physical
- Environmental

Interventions/Actions (e.g. medications, wound care, procedures, tests, diet, behavior changes, exercise, consults, rehab, calling MD for symptoms, education, anticipatory guidance, services, support, etc…)
- Start/stop date, interval
- Authorizing/responsible parties/roles/contact info
- Setting of care
- Instructions/parameters
- Supplies/Vendors
- Planned assessments
- Expected outcomes
- Related Conditions
- Status of intervention
Care Plan Decision Modifiers

- Patient/family preferences (values, priorities, wishes, adv directives, expectations, etc...)
- Patient situation (access to care, support, resources, setting, transportation, etc...)
- Patient allergies/intolerances

Care Team Members

each need different views of care plan
LCC Key Deliverable 2: Care Plan White Paper & Glossary

Jennie Harvell
U.S. Dept. of Health and Human Services
Office of the Assistant Secretary for Planning and Evaluation
White Paper Overview

• Published August 2012
• Explored the content and functionality of care plans needed to support longitudinal coordination care for medically-complex and/or functionally impaired individuals
• Described care plan components that aligned with and extended requirements in Meaningful Use requirements to support the care of medically complex and/or functionally impaired persons; and
• Identified opportunities to support the interoperable exchange of care plans, including the home health plan of care (HH-POC)
# Care Plan Glossary

<table>
<thead>
<tr>
<th>Term/Component</th>
<th>LCC Proposed Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care Plan</td>
<td>The term “care plan” considers the whole person and focuses on a number of health concerns to achieve high level goals related to healthy living. Care Plan and Plan of Care share the <strong>SIX</strong> components: health concern, goals, instructions, interventions, outcomes, and team member</td>
</tr>
<tr>
<td>Health Concern</td>
<td>Reflect the issues, current status and 'likely course' identified by the patient or team members that require intervention(s) to achieve the patient's goals of care, any issue of concern to the individual or team member</td>
</tr>
<tr>
<td>Goals</td>
<td>A defined outcome or condition to be achieved in the process of patient care. Includes patient defined goals (e.g., prioritization of health concerns, interventions, longevity, function, comfort) and clinician specific goals to achieve desired and agreed upon outcomes.</td>
</tr>
<tr>
<td>Instructions</td>
<td>Information or directions to the patient and other providers including how to care for the individual’s condition, what to do at home, when to call for help, any additional appointments, testing, and changes to the medication list or medication instructions, clinical guidelines and a summary of best practice. Detailed list of actions required to achieve the patient's goals of care.</td>
</tr>
<tr>
<td>Interventions</td>
<td>Actions taken to maximize the prospects of achieving the patient's or providers' goals of care, including the removal of barriers to success. Instructions are a subset of interventions.</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Status, at one or more points in time in the future, related to established care plan goals.</td>
</tr>
<tr>
<td>Team Member</td>
<td>Parties who manage and/or provide care or service as specified and agreed to in the care plan, including: clinicians, other paid and informal caregivers, and the patient.</td>
</tr>
</tbody>
</table>
LCC Key Deliverable 3: LCC Care Plan Exchange Use Case 2.0

Jennie Harvell
U.S. Dept. of Health and Human Services
Office of the Assistant Secretary for Planning and Evaluation
Use Case 2.0 Overview

• Published July 2013; built on recommendations and guidance presented in White Paper and Care Plan Glossary
• Identified the functional requirements for EHR systems so that clinical and administrative information related to a patient’s Care Plan or Plan of Care can be exchanged across multiple settings and disciplines
• Highlighted key differentiators among three types of plans used in patient care: Care Plan, Plan of Care and Treatment Plan
Use Case 2.0 Overview (cont’d)

- Requirements presented in two types of scenarios:
  - Scenario 1: Exchange of Care Plan among Care Team Members
    - Includes exchange of HHPoC between Provider and HHA
  - Scenario 2: Exchange of Care Plan between a Care Team Member and the Patient
- Focus on information needs of receiving Care Team to include the Patient
  - Identified capabilities required by Sending Entity Information System (EHR), Receiving Entity Information System (EHR) and PHR Application
LCC Key Deliverable 4: HL7 C-CDA Release 2 Implementation Guidance

Michael Tushan
Lantana Group
Director of Business Development
Key Deliverable 4 – C-CDA R2

• Critical Funders
  • New York eHealth Collaborative
  • Healthix
  • CCITI-NY
  • ASPE
  • SMART
  • MA IMPACT Project
• Lantana volunteered over 2000 unpaid hours which is almost half the total hours
Key Deliverable 4 – C-CDA R2

- S&I’s LCC LCP SWG defined the data elements and assisted in design of the CDA templates
  - Based on IMPACT Dataset
- Release 2 adds
  - Care Plan
  - Referral Note
  - Transfer Summary
  - Patient Generated Document
- Lantana developed or modified over 50 templates to update Consolidated CDA
LCC C-CDA Revisions Project: C-CDAR2.0

• LCC Community sponsored updates to C-CDAR1.1 and balloting of this new version through HL7
• One ballot package to address 4 revisions based on IMPACT Dataset:
  – Update to C-CDA Consult Note
  – NEW Referral Note
  – NEW Transfer Summary
  – NEW Care Plan document type (includes HHPoC signature requirements and aligns with HL7 Patient Care WG's Care Plan Domain Analysis Model- DAM)
• Ballot Package received 1013 comments
  – All 1013 ballot comments were reconciled from Oct 2013 until March 2014
  – Final C-CDA R2.0 scheduled to be published in October 2014
C-CDA Release 1.1 Documents: 8 standard document templates

**Document Templates:**
- Continuity of Care Document (CCD)
- Consultation Note
- Diagnostic Imaging Report (DIR)
- Discharge Summary
- History and Physical (H&P)
- Operative Note
- Procedure Note
- Progress Note
- Unstructured Document

**Section Templates:**

<table>
<thead>
<tr>
<th>Document Template</th>
<th>Section Template(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuity Of Care Document (CCD)</td>
<td>Allergies Medications Problem List Procedures Results Advance Directives Encounters Family History Functional Status Immunizations Medical Equipment Payers Plan of Care</td>
</tr>
<tr>
<td>History &amp; Physical (H&amp;P)</td>
<td>Allergies Medications Problem List Procedures Results Family History Immunizations Assessments Assessment and Plan Plan of Care Social History Vital Signs History of Present Illness History of Present Illness Chief Complaint Reason for Visit Review of Systems Physical Exam General Status</td>
</tr>
</tbody>
</table>

Section templates in GREEN demonstrate CDA’s interoperability and reusability.
Consolidated-CDA R2 Update Details

3 NEW Documents

- Transfer Summary
- Care Plan
- Referral Note

(Also enhanced Header to enable Patient Generated Documents)

6 NEW Sections

- Nutrition Section
- Physical Findings of Skin Section
- Mental Status Section
- Health Concerns Section
- Health Status Evaluations/Outcomes Section
- Goals Section

30 NEW Entries

- Advance Directive Organizer
- Cognitive Abilities Observation
- Drug Monitoring Act
- Handoff Communication
- Goal Observation
- Medical Device Applied
- Nutrition Assessment
- Nutrition Recommendations
- Characteristics of Home Environment
- Cultural and Religious Observation
- Patient Priority Preference
- Provider Priority Preference

...and lots more....
Pilots

Tom Moore
Vice President, Innovation
Healthix
Pilots Overview

• **Setting**
  - Large urban integrated delivery network
  - Behavioral health and substance abuse facility
  - Medicaid Health Home

• **Challenges**
  - Complex population
  - Complex configuration of facilities
  - Lack of interoperability

• **Goal**
  - Allow the exchange of and access to care plans by all members of the care team

• **Pilot Scope**
  - Adopt the pre-ballot CCDA care plan document
  - Implement interoperability of the care plan between two different care management systems
Care Coordination Challenges - Interoperability

1. Organizations in a single Health Home using different care management systems

2. Health Homes are in multiple RHIOs

3. Health Home uses a common care management tool but partners are in multiple Health Homes and RHIOs
Care Coordination Challenges - Stakeholders

- Complex populations – need for multi-disciplinary care team
  - Severe mental illness, suicide
  - Co-morbid medical illness
  - High rates of smoking, substance abuse
  - High rates of homelessness
  - High rates of incarceration
  - Lack of primary care
  - Lack of care coordination

- Complex configuration of facilities
  - Acute care facilities
  - Primary care, FQHCs, PCMHs
  - Home care agencies
  - Long term care facilities
  - Behavioral health agencies
  - Community based organizations
  - Housing organizations
  - Jails

The challenges faced by Medicaid Health Homes also must be addressed by other organizations with common goals including: Health Information Exchanges – both public (RHIOs like Healthix) and private (run by IDNs and payers), Accountable Care Organizations, FIDA and HARP programs being run by Managed Care Organizations.
That’s all the sites
Adoption of Standards for Care Plans

**Goals**
- Desired Outcomes
- Progress

**Interventions**
- Orders
- Education
- Assessments

**Patient Status**
- Functional
- Cognitive
- Physical

**Health Condition**
- Active Problems
- Strengths
- Health Concerns
- Risks

**Side Effects**

**Barriers**

**Concerns**

**Disabilities**

**Risk Factors**

Order → Assessments → Outcomes

Prioritize

The Office of the National Coordinator for Health Information Technology
Phase I Implementation - CCP Collaboration

Addiction Institute of New York (AINY) is a Division of the Department of Psychiatry at St. Luke’s-Roosevelt Hospital Center and is affiliated with the Columbia University College of Physicians and Surgeons. Both sites participating in the Phase 1 implementation (MTP and OTP) are clinical treatment programs of AINY.
Care Plan Exchange – Alignment with MU2*

Meaningful Use Stage 2, “Transitions of Care”, Measure #2 requires that a provider electronically transmit a summary care record for more than 10% of transitions of care and referrals using CEHRT or eHealth Exchange participant.

2014 Edition EHR certification criteria 170.314(b)(2)
Transitions of care—create and transmit transition of care/referral summaries.

(ii) Enable a user to electronically transmit CCDA in accordance with:

- ● SOAP (UseCase#1 below)
- ● Direct (UseCase#2 below)

*Adapted from Paul Tuten’s Presentation on Meaningful Use Stage 2 Transport Options 5/31/13, to illustrate alignment w/ MU2 ToC
Care Plan Authored in Netsmart
#### Objectives and Interventions

**Category:** Adherence

There are no Objectives/Interventions in this category yet.

**Category:** Behavioral Health

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Status</th>
<th>Target Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep mental health appointments/attend program as scheduled</td>
<td>In Progress</td>
<td>12/31/2013</td>
</tr>
<tr>
<td>Prepare a list of questions and concerns prior to your appointment.</td>
<td>In Progress</td>
<td>12/31/2013</td>
</tr>
<tr>
<td>Notify your Care Coordinator on the outcome of your appointment and when a follow up is scheduled.</td>
<td>In Progress</td>
<td>12/31/2013</td>
</tr>
<tr>
<td>Develop a relapse prevention/safety plan</td>
<td>In Progress</td>
<td>11/29/2013</td>
</tr>
<tr>
<td>Update all contacts if they change and report to Care Coordinator as soon as possible</td>
<td>In Progress</td>
<td>12/31/2013</td>
</tr>
<tr>
<td>Keep chemical dependency service appointments/attend program as scheduled</td>
<td>In Progress</td>
<td>12/31/2013</td>
</tr>
<tr>
<td>Know your triggers</td>
<td>In Progress</td>
<td>12/31/2013</td>
</tr>
</tbody>
</table>
Care Plan Reviewed by Editor using Caradigm
**Care Plan Reviewed by Editor using Caradigm**

### Continuum Health Partners

#### Health Concerns Section
- Recurrent depression (disorder) Status: Active Date Recorded: October 01, 2013

#### Goals Section
- Keep chemical dependency service appointments/attend program as scheduled Date: October 29, 2013
- Keep mental health appointments/attend program as scheduled Date: October 01, 2013
- Develop a relapse prevention/safety plan Date: October 01, 2013
- Attend self-help groups regularly Date: October 01, 2013

#### Interventions Section
- **Planned Intervention**
  - Know your triggers Status: Active Date: October 29, 2013
  - Prepare a list of questions and concerns prior to your appointment. Status: Active Date: October 01, 2013
  - Notify your Care Coordinator on the outcome of your appointment and when a follow up is scheduled Status: Active Date: October 01, 2013
  - Update all contacts if they change and report to Care Coordinator Status: Active Date: October 01, 2013
  - Arrange transportation in advance, if you need assistance contact your Care Coordinator Status: Active Date: October 01, 2013

#### Completed Intervention
- Know your triggers Status: Completed Date: November 18, 2013
- Arrange transportation in advance, if you need assistance contact your Care Coordinator Status: Completed Date: October 28, 2013

#### Health Status Evaluations/Outcomes Section
- Keep chemical dependency service appointments/attend program as scheduled completed Date: November 18, 2013
- Attend self-help groups regularly completed Date: October 28, 2013
Care Plan Reviewed by Reader in Healthix
Care Plan Reviewed by Reader in Healthix
Care Plan Reviewed by Reader in Healthix

<table>
<thead>
<tr>
<th>Patient</th>
<th>Martha Carlson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of birth</td>
<td></td>
</tr>
<tr>
<td>Contact info</td>
<td>address not available</td>
</tr>
<tr>
<td></td>
<td>Telecom information not</td>
</tr>
<tr>
<td></td>
<td>available</td>
</tr>
<tr>
<td>Sex</td>
<td>Female</td>
</tr>
<tr>
<td>Patient IDs</td>
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<tr>
<td>Document Id</td>
<td>2.16.840.1.113883.3.1436.2.9.1.1</td>
</tr>
<tr>
<td>Document Created</td>
<td>November 18, 2013, 10:44, EST</td>
</tr>
<tr>
<td>Author</td>
<td>Janet Gibson, AINY</td>
</tr>
<tr>
<td>Encounter Id</td>
<td>329</td>
</tr>
<tr>
<td>Encounter Date</td>
<td>From November 18, 2013</td>
</tr>
<tr>
<td>Encount Type</td>
<td>Outpatient</td>
</tr>
<tr>
<td>Entered by</td>
<td>Janet Gibson</td>
</tr>
<tr>
<td>Signed</td>
<td>Martha Carlson</td>
</tr>
<tr>
<td>Legal authenticator</td>
<td>Janet Gibson of Continuum Health Partners signed at November 18, 2013</td>
</tr>
</tbody>
</table>
### Table of Contents
- Health Concerns Section
- Goals Section
- Interventions Section
- Health Status Evaluations/Outcomes Section

### Health Concerns Section

<table>
<thead>
<tr>
<th>Concern</th>
<th>Status</th>
<th>Date Recorded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recurrent depression (disorder)</td>
<td>Active</td>
<td>October 01, 2013</td>
</tr>
</tbody>
</table>

### Goals Section

<table>
<thead>
<tr>
<th>Goal</th>
<th>Start Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep chemical dependency service appointments/attend program as scheduled</td>
<td>October 29, 2013</td>
</tr>
<tr>
<td>Keep mental health appointments/attend program as scheduled</td>
<td>October 01, 2013</td>
</tr>
<tr>
<td>Develop a relapse prevention/safety plan</td>
<td>October 01, 2013</td>
</tr>
<tr>
<td>Attend self-help groups regularly</td>
<td>October 01, 2013</td>
</tr>
</tbody>
</table>

### Interventions Section

<table>
<thead>
<tr>
<th>Planned Intervention</th>
<th>Status</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know your triggers</td>
<td>Active</td>
<td>October 29, 2013</td>
</tr>
<tr>
<td>Prepare a list of questions and concerns prior to your appointment.</td>
<td>Active</td>
<td>October 01, 2013</td>
</tr>
<tr>
<td>Notify your Care Coordinator on the outcome of your appointment and when a follow up is scheduled</td>
<td>Active</td>
<td>October 01, 2013</td>
</tr>
<tr>
<td>Update all contacts if they change and report to Care Coordinator as soon as possible</td>
<td>Active</td>
<td>October 01, 2013</td>
</tr>
<tr>
<td>Arrange transportation in advance, if you need assistance contact your Care Coordinator</td>
<td>Active</td>
<td>October 01, 2013</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Completed Intervention</th>
<th>Status</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know your triggers</td>
<td>Completed</td>
<td>November 18, 2013</td>
</tr>
<tr>
<td>Arrange transportation in advance, if you need assistance contact your Care Coordinator</td>
<td>Completed</td>
<td>October 28, 2013</td>
</tr>
</tbody>
</table>

### Health Status Evaluations/Outcomes Section

<table>
<thead>
<tr>
<th>Item</th>
<th>Outcome</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep chemical dependency service appointments/attend program as scheduled</td>
<td>completed</td>
<td>November 18, 2013</td>
</tr>
<tr>
<td>Attend self-help groups regularly</td>
<td>completed</td>
<td>October 28, 2013</td>
</tr>
</tbody>
</table>
Pilots Lessons Learned

• Adoption of the standard for Care Plans is taking longer than expected. We were hoping that:
  ▪ The standard would be approved and added to the certification requirements for EHRs
  ▪ EHRs and care management systems would incorporate the standard into their product rapidly
  ▪ A critical mass of providers would be able to exchange care plans regardless of the vendor they chose
• The model for exchanging Care Plans differs from the model for exchanging CCDs
  ▪ CCDs tend to be linear
  ▪ Care Plans tend to be interactive
• Short term goals
  ▪ Publish care plans in human readable format and make available to all qualified providers
  ▪ Encourage limited interoperability where possible – Brooklyn Health Home / GSIH approach
Real World Applications

Lantana

Michael Tushan
Director of Business Development
mike.tushan@lantanagroup.com
Project Goals

• Create transition-of-care documents in long-term care environments – adapted for care plan editing
• Ease of use
  • Laptop
  • Tablet
  • Smartphone
• Integrate with HIEs to display patient information from various data sources
• Conform to
  • Mass HIE transition-of-care summary (source of requirements for LCC summary)
  • Consolidated CDA, Release 2.0 Care Plan
Project Goals

• Following the work of LCC, we adapted the tool to address another aspect of work using the LCC Care Plan within the Health Story demonstration

• Health Story Project Goals
  • Lower the threshold for information exchange so that
    • All may participate
    • Approach 100% of the records for 100% of patients
  • Incentivize participation at all levels of interoperability
  • Recognize diversity of applications
  • Respect the clinical voice
  • Provide value back to those who incur the costs
• Overcome misperceptions on electronic health records
  • “During any evaluation, I like to scan the prior notes to remind myself of how the patient has been doing over the last few weeks. …with a paper chart, …it was almost like reading a short story.
  • “Imagine reading a short story and being allowed to view only one paragraph at a time. Imagine needing to open or close multiple windows to move in between paragraphs or needing to search to determine whether there is a prior paragraph to read.”
  • Lawrence B. Marks, MD
  • Newsobserver.com, October 4, 2013
Project Overview

- Create an electronic record that ensures value for
  - Care delivery
  - Evidence-based medicine
  - And which endures over time as technology evolves
- Vision
  - Comprehensive electronic records that
  - Tell a patient’s complete health story
# Project Overview

[Image of a patient summary page with sections for allergies, advanced directive, problems, and medications.]

**Allergies:**
- Vancomycin Hydrochloride Novaplus
- Tree pollen

**Advanced Directive:**
- Advanced Directive on File: No
- Healthcare Proxy: Lisa Jones, Sibling, 761-280-2898
- Organ Donor: No

**Problems:**
- Health Maintenance
- Diabetes Mellitus
- Hyperlipidemia
- Cigarette Addiction Current: 1 pack/day
- Chronic Depression
- Osteoarthritis
- Hypothyroidism
- Breast Cancer

**Medications:**
- Insulin Lantus (25 Units Injection, suspension Subcutaneous) Daily
- Novolog Insulin (8 Units Injection, suspension Subcutaneous) Three times per day
- Synthroid (1 - 25 mcg Tablet Oral) Daily
- Simvastatin (1 - 40 mg Tablet Oral) Daily
- Naproxen (1 - 250 mg Tablet Oral) Twice a day
- Wellbutrin 150 MG-12 HR Extended Release Tablet [2 Tablet Oral]
- Aspirin (81 Tablet Oral) Daily
- Compazine (10 mg Oral)
- Insulin Regular (Subcutaneous)
- Docetaxel (75 mg/m2 Intravenous)
- Cyclophosphamide (.6 mg/m2 Intravenous)
## Project Overview

### Medications Data Entry

**Prescribed Medications**

<table>
<thead>
<tr>
<th>Drug Name</th>
<th>Dosage Taken/Frequency</th>
<th>Current Active</th>
<th>Preadmission</th>
<th>Admission</th>
<th>Discharge</th>
<th>Prescriber</th>
<th>Prescriber dose chgs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthracyclines Lifetime Dose</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Cyclophosphamide 10 MG/ML Injectable Solution</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Dexamethasone</td>
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<tr>
<td>docetaxel 10 MG/ML Injectable Solution</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Doxorubicin 1 MG/ML Irrigation Solution</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lantus insulin</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Naproxen</td>
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</tr>
<tr>
<td>Novolog insulin</td>
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<tr>
<td>Simvastatin</td>
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</tr>
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<td>Synthroid</td>
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<tr>
<td>Tamoxifen 20 MG Oral Tablet</td>
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</tbody>
</table>

**Excluded Medications**


Project Overview
Project Overview

Table of Contents
- VITAL SIGNS
- FUNCTIONAL STATUS
- IMMUNIZATIONS
- ALLERGIES, ADVERSE REACTIONS, ALERTS

VITAL SIGNS

<table>
<thead>
<tr>
<th>Time</th>
<th>Height</th>
<th>Weight</th>
<th>BMI</th>
<th>BP</th>
<th>Heart Rate</th>
<th>Heart Rhythm</th>
<th>Resp Rate</th>
<th>O2 Sat</th>
<th>Temp</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

FUNCTIONAL STATUS

IMMUNIZATIONS

ALLERGIES, ADVERSE REACTIONS, ALERTS
Project Lessons Learned

- It is surprisingly more difficult than it would appear to plug an application into an HIE
Real World Applications

Gordon Raup
CTO
graup@datuit.com
Project Goals

• Integrate information from multiple sources safely and securely to enable better communication among clinicians.
• Integrate a set of tools that can be utilized by all clinicians and caregivers to facilitate working together across organizations and disciplines to coordinate care.
• Allow clinicians, patients, family members and other caregivers to work together to:
  – Optimize quality of life.
  – Avoid complications and the need for unanticipated acute care.
  – Allow family members, caregivers and clinicians to be up-to-date with the care plan and resources available.
Project Challenges

- We have not yet implemented a project, but have received feedback from those who are interested in using our type of tool. Some barriers to implementing the Care Plan Manager:
  - “Medical” emphasis of our tool.
  - Utilization of standards that are just becoming mature.
  - Early stage of interoperability, especially patient-mediated, and questions about how interoperability standards will work.
- We have spent the last several months addressing these issues.
  - Partners developing complementary technology that further enables clinicians, patients and caregivers.
  - Care Plan Manager upgraded to add ways to access more information that clinicians, patients and caregivers need.
Project Overview

Datuit has partnered with Connected Health Resources (CHR) to help patients, family members and caregivers. CHR makes it easier to:

- Find products and services to help stay in their homes.
- Communicate among family members about status and concerns.
- Understand the current Care Plan and ask questions, clarify and update as needed.

Connected Health Resources features a Patient and Caregiver Gateway to provide on-going support for care outside the acute care setting.
Pilot Overview

Datuit is looking for additional provider organizations interested in utilizing technology to communicate problems, goals and interventions among patients, caregivers and clinicians. Datuit will:

• Support care coordinators and patient navigators by allowing patients to ask them to take that role.
• Bring in structured medical information from clinics and hospitals.
• Help reconcile conflicting problem lists, medication lists, allergies, advanced directives by bringing in patients, their caregivers and clinicians into the same Care Plan.
• Offer additional capabilities to enable care at home via Connected Health Resources and other partner apps.
• Allow linking of educational materials in the Care Plan for patients and caregivers to access and other clinicians to view.
Project Lessons Learned

• Bridging the communication gap between patients and family members and medical professionals isn’t easy.
  • Blue Button capabilities are new for providers and patients.
  • Patient goals and clinician goals often aren’t the same.
  • If patients and clinicians agree on goals, not all on the healthcare team understand the plan to reach those goals.
  • Clinicians aren’t always utilizing shared decision-making, which is important to get patients on the same page with them.
• Interoperability is new for provider organizations.
  • Standards are new, and not all EHRs meaningfully support them.
  • Provider organizations do not always have the infrastructure to support interoperability, including V/D/T mandated by Meaningful Use Stage 2.
Real World Applications

Care at Hand

Andrey Ostrovsky, MD
CEO, Co-Founder
The healthcare data design & user experience gap
Current Design –
data used same way in every setting
User experience – customers can’t wait for standards to evolve
S&I LCC Ingredients, Care at Hand Recipe

Step 1 | Precise allocation of resources for most at-risk patients to avoid preventable acute care utilization

Step 2 | Building capacity of underutilized, inexpensive workforce

Step 3 | Quick, inexpensive proof of value using rapid cycle approaches

Step 4 | Mix for 3 min

Step 5 | Serve warm with side of Triple Aim
Data drives specific timing and dose of nurse, social worker, and/or community health worker intervention.
Data drives specific timing and dose of nurse, social worker, and/or community health worker intervention.
Building capacity of underutilized, inexpensive workforce
Quick, inexpensive proof of value through rapid cycle testing
It’s not about data standards...

...it’s about aging and thriving in place
For more information

Join me at the IHI National Forum
December 7-10, 2014 Orlando, FL
IHI.ORG/FORUM

DECEMBER 11-12, 2014 • FAIRMONT WASHINGTON • WASHINGTON D.C.
FDA/CMS SUMMIT FOR PAYERS
Drive Collaboration & Innovation to Succeed in a Patient-Centric Environment
www.FDACMSSummitForPayers.com

http://blog.careathand.com
The Path Forward

Evelyn Gallego, MBA, CPHIMS
S&I LCC Initiative Coordinator
ONC Office of Standards & Technology
Path Forward

• The LCC Initiative is at its completion as of today, September 29, 2014
• LCC HL7 Artifacts now fully transitioned to HL7 Workgroups:
  – Structured Documents WG
    • Responsible for C-CDA Standard Revisions
    • Meet every Thursday from 10 to 12pm ET
    • Wiki: http://www.hl7.org/Special/committees/structure/index.cfm
  – Patient Care WG
    • Responsible for Care Plan, Care Coordination and Health Concern Topic
    • Care Plan Project meets every other Weds from 4 to 5:30pm ET
    • Health Concern Topic meets every other Thursday from 4 to 5pm ET
    • Wiki: http://www.hl7.org/Special/committees/patientcare/index.cfm
NEW eLTSS Initiative

• ONC has partnered with CMS to launch new S&I Initiative focused on the identification and harmonization of standards for an electronic Long-term Services and Support (eLTSS) record
• eLTSS record development is one of the four components under the CMS planning and demonstration grant for Testing Experience and Functional Tools (TEFT) in Medicaid community-based LTSS
  – Participating TEFT States: AZ, CO, CT, GA, MD, MN
• Once eLTSS standard is identified, states must test and validate standard with CB-LTSS providers and with beneficiary PHR systems
  – Will be initiated through Pilot Phase of S&I Framework Process
• eLTSS will leverage standards identified by LCC Initiative
Next Steps for eLTSS Initiative

- CMS TEFT grantees are invited to participate in the eLTSS Initiative as part of their grant program requirements.
- eLTSS Initiative is open for other stakeholder groups to participate:
  - Other States and State Medicaid Offices
  - LTSS system vendors
  - Other HIT systems
  - LTSS Providers and Facilities
  - Consumer Engagement Organizations
- Timeline: eLTSS Initiative will launch Nov 2014 and will run for duration of CMS TEFT grant program (3 years)
“People who say it can’t be done should get out of the way of people who are doing it.”

Borrowed from Victor Lee (Zynx Health) and what must have been a fortuitous dinner... his summary of LCC
Celebrating our Community

A gigantic heartfelt and humble

Thank You

We could not have done this incredibly dynamic, effective work without your inspiration, tenacity and expertise.
Useful S&I Wiki Links

Wiki
- http://wiki.siframework.org/Longitudinal+Coordination+of+Care+%28LCC%29

Use Cases
- UC1: http://wiki.siframework.org/LCC+WG+Use+Case+%26+Functional+Requirements
- UC2: http://wiki.siframework.org/LCC+WG+Use+Case+2.0

Pilots
- http://wiki.siframework.org/LCC+Pilots+WG

Harmonization and Standards:
- http://wiki.siframework.org/LCC+Candidate+Standards

Reference Materials
LCC Initiative: Contact Information

• LCC Leads
  – Dr. Larry Garber (Lawrence.Garber@reliantmedicalgroup.org)
  – Dr. Terry O’ Malley (tomalley@partners.org)
  – Dr. Bill Russell (drbruss@gmail.com)
  – Sue Mitchell (suemitchell@hotmail.com)

• LCC/HL7 Coordination Lead
  – Dr. Russ Leftwich (Russell.Leftwich@tn.gov)

• Federal Partner Lead
  – Jennie Harvell (jennie.harvell@hhs.gov)

• Initiative Coordinator
  – Evelyn Gallego (evelyn.gallego@siframework.org)

• Project Management
  – Pilots Lead: Lynette Elliott (lynette.elliott@esacinc.com)
  – Use Case Lead: Becky Angeles (becky.angeles@esacinc.com)

LCC Wiki Site: http://wiki.siframework.org/Longitudinal+Coordination+of+Care