Summer Institute in Nursing Informatics
The IMPACT ACT and Data Element Library: Advancing PAC Data Interoperability

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Acronyms in this Presentation

- CMS – Centers for Medicare & Medicaid Services
- DCPAC – Division of Chronic and Post-Acute Care
- DEL – Data Element Library
- HHA – Home Health Agency
- HIS – Hospice Item Set
- HIT – Health Information Technology
- IMPACT – Improving Medicare Post-Acute Care Transformation Act
- IRF – Inpatient Rehabilitation Facility
- IRF-PAI – Inpatient Rehabilitation Facility Patient Assessment Instrument
- LCDS – LTCH CARE Data Set
- LOINC – Logical Observation Identifiers Names and Codes
- LTCH – Long-Term Care Hospital
- MDS – Minimum Data Set
- OASIS – Outcome and Assessment Information Set
- PAC – Post-Acute Care
- SNF – Skilled Nursing Facility
- SNOMED-CT – Systematized Nomenclature of Medicine - Clinical Terms
- SPADEs – Standardized Patient Assessment Data Elements

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Overview

- Post-Acute Care Overview
- IMPACT Act and the Data Element Library
- Fast Healthcare Interoperability Resources (FHIR) Development
  - PACIO Project

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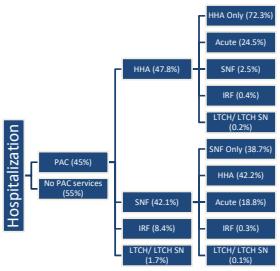
Why is Post-Acute Care Important?



- **Approximately 33,000 PAC Providers in the U.S. care for 6.9 million beneficiaries costing over $73.8 billion annually**
- After a hospitalization, 45% of patients required PAC services**. HHA and SNFs were the most utilized services after a hospital admission**
- Of those patients that required HHA services after a hospital admission, 72.3% did not require any further services
- Of those patients that required SNF services 38.7% did not require any further services but 42.2% transitioned to HHA.

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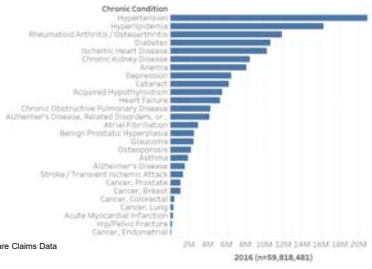
Volume of Claims by Chronic Conditions in 2016



Source: 2016 Medicare Claims Data

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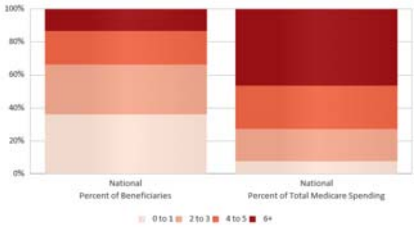
Distribution of Beneficiaries by Number of Chronic Conditions & Total Medicare Spending in 2015



Source: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Dashboard/chronic-conditions-state/cc_state_dashboard.html

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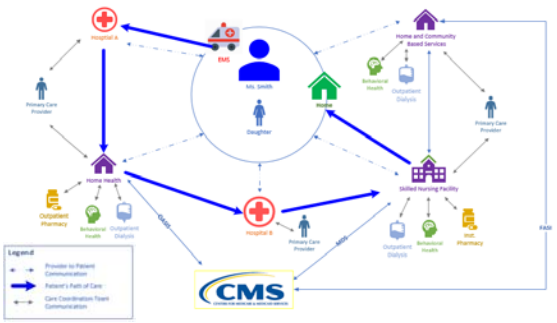
IMPACT Act and the Data Element Library (DEL)

- The IMPACT Act calls for standardization and interoperability of PAC assessment instrument DEs
  - Standardization and Interoperability of DEs supports:
    - Quality Measurement
    - Payment Transformation
    - Care Planning
    - Survey and Certification
  - Promotion of Health Information Exchange (HIE) to support:
    - Care coordination
    - Improved health care efficiency
    - Improved patient outcomes
    - Reduced costs
- To promote interoperability in PAC, in June 2018 CMS developed and launched the Data Element Library (DEL), which is a centralized public resource for CMS PAC assessment instrument DEs (e.g. questions and response options), and their related mappings to nationally accepted health IT standards (including LOINC, SNOMED, C-CDA*, FHIR*)
  - DEL allows for access to and enables reuse and exchange of DEs
  - DEL maintains consistency in format, meaning, and use of Assessment Instrument Des
  - DEL does not contain any patient data

Visit the DEL here: https://del.cms.gov

* = Under Construction

The Patient Story



Source: CMS DCPAC

IMPACT Act of 2014

- Bi-partisan bill passed on September 18, 2014, and signed into law October 6, 2014
- The Act requires *standardized* patient assessment data elements for:
  - LTCHs: LCDS
  - SNFs: MDS
  - HHAs: OASIS
  - IRFs: IRF-PAI
- **The Act specifies that data** "… be **standardized and interoperable** so as to allow for the **exchange of such data among such post-acute care providers and other providers** and the use by such providers of such data that has been so exchanged, including by **using common standards and definitions** in order to provide access to **longitudinal information** for such providers to **facilitate coordinated care** and **improved Medicare beneficiary outcomes**…".

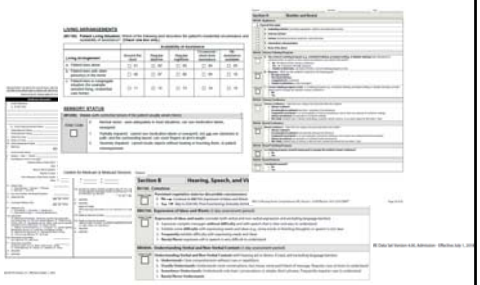
Improving Medicare Post-Acute Care Transformation (IMPACT) Act of 2014

Points of Failure

- **Poor communication across care providers, including outpatient**
  - Medication discrepancies such as drug omissions during transitions of care are common
  - Multiple modes of information transmission are often used
  - Delays in PAC services can lead to adverse events and preventable readmissions
  - Redundant information collection creates inefficiencies and burden
- **Reliance on patient recall during periods of high stress**
  - Recall of information can be unreliable
  - Patients may be unconscious, incapacitated, or otherwise unresponsive / unable to communicate information
  - Increased patient / family stress
- **Increased Cost and Provider Burden**
  - Additional costs related to hospital stays from adverse events, readmissions
  - Additional administrative costs to locate, reconcile, and coordinate information
  - Longer length of stays and higher resource utilization

What are Post-Acute Care Assessments?

CMS PAC Assessments
LTCH Continuity Assessment Record & Evaluation (CARE) Data Set (LCDS)
Resident Assessment Instrument (RAI) Minimum Data Set (MDS)
Outcome and Assessment Information Set (OASIS)
IRF Patient Assessment Instrument (IRFPAI)
Hospice Item Set (HIS)*



PAC Assessment Content

- **Administrative Content**
  - Patient Name
  - Date of Birth
  - Race/Ethnicity
  - Marital status
  - Admission/Discharge dates
  - Admit from/Discharged to locations
  - Reason for admission
  - Provider NPI, CCN, Medicaid Provider #
- **"SPADEs"**
  - Function (e.g., self care and mobility)
  - Cognitive function (e.g., express & understand ideas; mental status, such as depression and dementia)
  - Special services, treatments & interventions (e.g., need for ventilator, dialysis, chemotherapy, and total parenteral nutrition)
  - Medical conditions and co-morbidities (e.g., diabetes, heart failure, and pressure ulcers)
  - Impairments (e.g., incontinence; impaired ability to hear, see, or swallow)
  - Other categories
- **Clinical Content**
  - Diagnosis/medical conditions
  - Mental/Cognitive Status (memory, orientation, consciousness, delirium, mood, behavior)
  - Communication (express needs, understanding verbal/non-verbal content, hearing and vision)
  - Functional Status (Self-care/ADLs, Mobility, Use of assistive devices)
  - Bladder and Bowel continence
  - Falls
  - Pressure ulcers and other skin conditions
  - Surgery
  - Nutritional and swallowing status
  - Medication information
  - Special treatments, procedures & programs
  - Height and Weight
  - Patient preferences and goals of treatment
  - Pain
  - Vaccinations
  - Therapy- PT, OT, SLT
  - Living arrangements/support availability
  - Care planning

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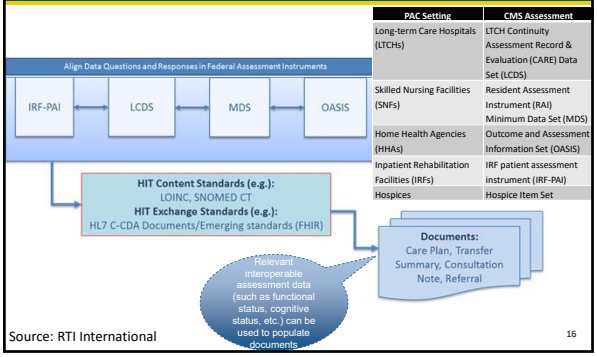
Making PAC Assessment Data Elements Standardized/Aligned and Interoperable



PAC Setting	CMS Assessment
Long-term Care Hospitals (LTCHs)	LTCH Continuity Assessment Record & Evaluation (CARE) Data Set (LCDS)
Skilled Nursing Facilities (SNFs)	Resident Assessment Instrument (RAI) Minimum Data Set (MDS)
Home Health Agencies (HHAs)	Outcome and Assessment Information Set (OASIS)
Inpatient Rehabilitation Facilities (IRFs)	IRF patient assessment instrument (IRF-PAI)
Hospices	Hospice Item Set

Source: RTI International

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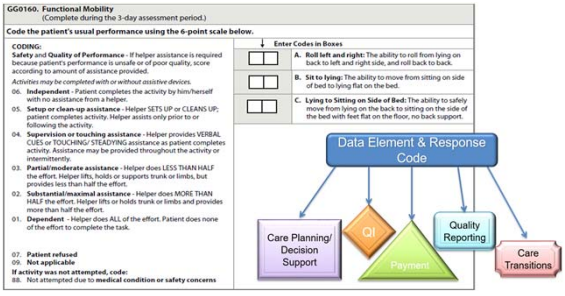
Data Elements: Standardization One Question → One Response: Many Uses



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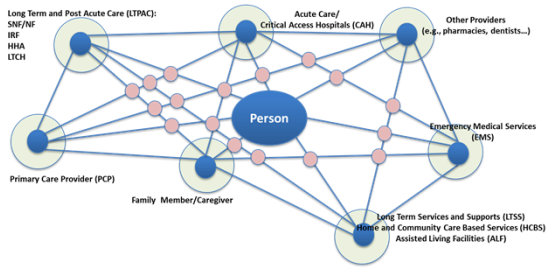
Guiding Principle: Data Needs to Follow the Person



Support data availability in real-time. Electronic information is exchanged and used by health IT systems without special effort on the part of the user.

Source: RTI International

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The Data Element Library

- The (DEL) is a centralized resource for CMS assessment data elements (e.g. questions and response options), and their associated mappings to nationally accepted health information technology (IT) standards.
- Use is optional
  - Supports provider exchange of electronic health information for better care coordination
  - Enables more seamless/less costly health information exchange
  - Reduces overall provider burden through use and exchange of health care data
  - Promotes high quality, personalized, efficient health care
  - Supports real-time, data driven, clinical decision making
- Search and generate reports (assessment questions & response options, their attributes, and linked HIT standards)
- No patient data

Visit the DEL here: https://del.cms.gov

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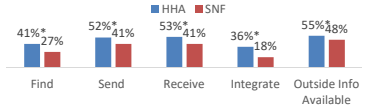
SNF & HHA EHR Adoption and Interoperability in 2017

- EHR adoption rates were higher among HHAs compared to SNFs in 2017

- HHAs are more likely than SNFs to engage in each domain of interoperability.



https://www.healthit.gov/sites/default/files/page/2018-11/Electronic-Health-Record-Adoption-and-Interoperability-among-U.S.-Skilled-Nursing-Facilities-and-Home-Health-Agencies-in-2017.pdf

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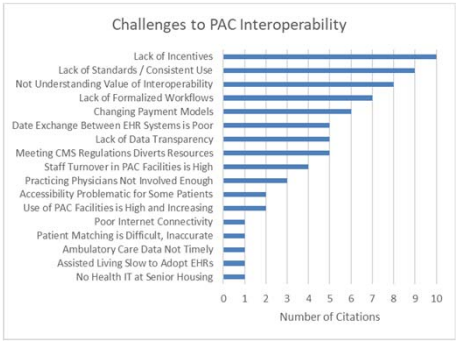
PAC Interoperability Challenges



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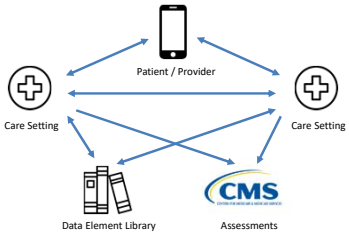
PACIO Project Use Cases



Functional Status Use Case

Cognitive Status Use Case

Under Development:

FHIR Implementation Guide

Reference Implementation

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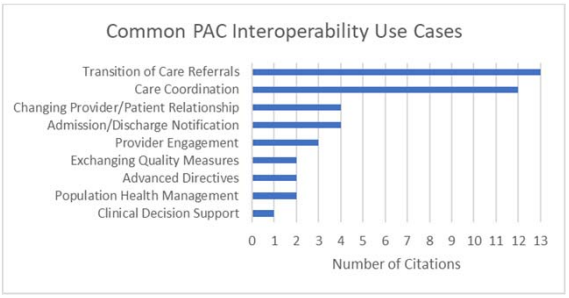
PAC Interoperability Use Cases



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Medicaid Technology Financing to Support Health Information Exchange Activities

CMS Incentive through State Medicaid Director Letter (#16-003)

Medicaid HITECH funds are now available to support states in their initiatives to expand interoperability and data sharing related to connecting professionals and hospitals that are eligible for Medicaid EHR Incentive Payments to other Medicaid providers, including behavioral health, long-term care providers (including nursing facilities), home health providers, and other Medicaid providers, including community-based Medicaid providers.

- **This funding is in place until 2021** and is a 90/10 Federal State match. The state is still responsible for providing the 10%.
- The funding is for HIE and interoperability **only**, not to provide EHRs.
- The funding is for implementation **only**, it is not for operational costs.
- The funding still must be cost allocated if other entities than the state Medicaid agency benefit
- **All providers or systems supported by this funding must connect to Medicaid Eligible Providers**

For more information:
https://www.medicaid.gov/federalpolicyguidance/downloads/smd16003.pdf

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PACIO Project

The PACIO Project is a collaborative effort to advance interoperable health data exchange between post-acute care providers, patients, and other key stakeholders.

PointClickCare, NIC, Lantana Consulting Group, The Office of the National Coordinator for Health Information Technology, NETRx, MatrixCare, LeadingAge, WellSky, VA, U.S. Department of Veterans Affairs, Best Buy, homecare homebase, ESAC, Lower Cape Fear Hospice, patientlink, Kno2, Encompass Health, CMS, Livpact, GPM Corp, Telligen, RTI International, RAND Corporation, Partners HealthCare, Cerner, Leavitt Partners, EMI Advisors, NASL, brightree, Red Kangaroo, CIMPAR, APTA, SHP, forcura, MedicaSoft

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Resources

- For more information on the IMPACT Act, visit the **IMPACT Act** webpage
- For more information on Post-Acute Care Quality Reporting Programs, visit:
  - **Home Health Agencies**
  - **Hospice Agencies**
  - **Inpatient Rehab Facilities**
  - **Long-term Care Hospitals**
  - **Skilled Nursing Facilities**
- For DEL updates, sign up for the listserv **here**
- For DEL feedback or questions, contact: **DELHelp@cms.hhs.gov**

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