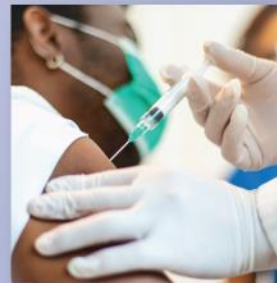


Leveraging Standardized Functional Status and Cognitive Data to Inform Care Coordination Across the Health Care Ecosystem





AGENDA

- Background on OBRHI
- Overview of CMS efforts to promote interoperable exchange of standardized clinical and social determinants assessment data (Lorraine Wickiser, CMS)
- Overview on ONC policies that are enabling health information exchange (Brenda Akinngabe, ONC)
- Lessons learned and recommendations for optimizing the use of standardized cognitive and functional decline data across the healthcare ecosystem (Terry O'Malley Mass. General Hospital and Spaulding Nursing & Therapy Center North End, Retired)
- Case study on the use of interoperable data to facilitate care coordination and optimize population health (Constantine Lyketsos, John Hopkins Health System)



Learning Objectives

- Promote knowledge on the role standardized data has in coordinating health and social needs.
- Discuss advancements on exchanging USCDI and standardized data using FHIR, including PACIO's efforts on advanced directives, function, cognition and more.
- Learn how healthcare systems leverage standardized functional and cognitive status to optimize health outcomes.

Background on OBRHI

Liz Palena-Hall
Health Insurance Specialist, MIS, MBA, RN

Beth Connor
Health Insurance Specialist, RN



Office of Burden Reduction and Health Informatics (OBRHI) Vision & Goals

OBRHI envisions a future with a healthcare enterprise that operates seamlessly and equitably to achieve health.

OBRHI's work is guided by a strategic plan, which establishes four key goals and objectives governing the planning and implementation of operational activities.



Overview of CMS Efforts to Promote Interoperable Exchange of Standardized Clinical and Social Determinants Assessment Data

Lorraine Wickiser
Nurse Consultant, RN



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:
 - Long-term Care Hospitals (LTCHs)
 - Skilled Nursing Facilities (SNFs)
 - Home Health Agencies (HHAs)
 - Inpatient Rehabilitation Facilities (IRFs)
- The Act specifies the 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...".
- Standardized patient assessment data element Clinical Categories:
 - Functional status
 - Cognitive function and mental status
 - Special services, treatments, and interventions
 - Medical conditions and co-morbidities
 - Impairments



Post-Acute Care Assessments Submitted Electronically

PAC Setting	CMS PAC Assessments
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 (HIS)
Home & Community Based Services	HCBS Functional Assessment Standardized Items (FASI)

LIVING ARRANGEMENTS

(M1100) Patient Living Situation: Which of the following best describes the patient's residential circumstance and availability of assistance? (Check one box only.)

Living Arrangement	Availability of Assistance				
	Around the clock	Regular daytime	Regular nighttime	Occasional / short-term assistance	No assistance available
a. Patient lives alone	<input type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04	<input type="checkbox"/> 05
b. Patient lives with other person(s) in the home	<input type="checkbox"/> 06	<input type="checkbox"/> 07	<input type="checkbox"/> 08	<input type="checkbox"/> 09	<input type="checkbox"/> 10
c. Patient lives in congregate situation (for example, assisted living, residential care home)	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTER FOR MEDICARE & MEDICAID SERVICES
INPATIENT REHABILITATION F...

Identification Information*

1. Facility Information
A. Facility Name _____
B. Facility Medicare Provider Number _____
2. Patient Medicare Number _____
3. Patient Medicaid Number _____
4. Patient First Name _____
5A. Patient Last Name _____

SENSORY STATUS

(M1200) Vision (with corrective lenses if the patient usually wears them):

Enter Code 0 Normal vision: sees adequately in most situations; can see medication labels, newspaper.

1 Partially impaired: cannot see medication labels or newspaper, but can see obstacles in path, and the surrounding layout; can count fingers at arm's length.

2 Severely impaired: cannot locate objects without hearing or touching them, or patient is nonresponsive.

Hispanic or Latino D _____
Native Hawaiian or Other Pacific Islander E _____
White F _____

10. Marital Status (1 - Never Married; 2 - Married; 3 - Widowed; 4 - Separated; 5 - Divorced) _____

11. Zip Code of Patient's Pre-Hospital Residence _____

12. Admission Date MM/DD/YYYY _____

13. Assessment Reference Date MM/DD/YYYY _____

14. Admission Class (1 - Initial Admit; 2 - Evaluation; 3 - Readmission; 4 - Unplanned Discharge; 5 - Continuing Rehabilitation) _____

15A. Admit From (01 - Home private home care; board/care, assisted living, group home, transitional living; 02 - Short-term General Hospital; 03 - Skilled Nursing Facility (SNF); 04 - Intermediate care; 06 - Home under care of organized home health service organization; 09 - Hospice Home; 31 - Hospice (institutional facility); 61 - Swing bed; 62 - Another Department Rehabilitation Facility; 63 - Long-Term Care Hospital (LTCH); 64 - Medically Nursing Facility; 65 - Inpatient Psychiatric Facility; 66 - Critical Access Hospital; 99 - Not Listed) _____

16A. Pre-hospital Living Setting (Use codes from I.I.A. Admit From) _____

17. Pre-hospital Living With (Code only if from 16A to 01 - Home; Code using 01 - Alone; 02 - Family/Spouse; 03 - Friends; 04 - Attendant; 05 - Other) _____

18. DELETED

19. DELETED

24A. Are there any arthritis conditions recorded in items #11, #12, or #24 that meet all of the regulatory requirements for IRF classification (e.g. 412.200)(2)(3), (4), and (iii)? (0 - No; 1 - Yes) _____

25. DELETED

26. DELETED

26A. Height and Weight (While measuring (if the number is X.1-X.4 round down, X.5 or greater round up) Measure weight consistently, according to standard facility practice (e.g., in a.m. after voiding, with shoes off, etc.)

26A. Height on admission (in inches) _____

27. DELETED

28. DELETED

Section B Hearing, Speech, and Comatose

B0100. Comatose
Enter Code 0 Persistent vegetative state/no discernible consciousness
0. No → Continue to BB0700, Expression of Ideas and Wants
1. Yes → Skip to GG0100, Prior Functioning: Everyday

BB0700. Expression of Ideas and Wants (3-day assessment period)
Enter Code 0 Expression of ideas and wants (consider both verbal and non-verbal)
4. Expresses complex messages without difficulty
3. Exhibits some difficulty with expressing needs
2. Frequently exhibits difficulty with expressing needs
1. Rarely/Never expresses self or speech is very difficult to understand

BB0800. Understanding Verbal and Non-Verbal Content (3-day assessment period)
Enter Code 0 Understanding Verbal and Non-Verbal Content (with hearing aid or device, if used, and excluding language barriers)
4. Understands: Clear comprehension without cues or repetitions
3. Usually Understands: Understands most conversations, but misses some part/intent of message. Requires cues at times to understand
2. Sometimes Understands: Understands only basic conversations or simple, direct phrases. Frequently requires cues to understand
1. Rarely/Never Understands

Resident _____ Identifier _____ Date _____

Section H Bladder and Bowel

H0100. Appliances
Check all that apply
 A. Indwelling catheter (including suprapubic catheter and nephrostomy tube)
 B. External catheter
 C. Ostomy (including urostomy, ileostomy, and colostomy)
 D. Intermittent catheterization
 Z. None of the above

H0200. Urinary Toileting Program
Enter Code A. Has a trial of a toileting program (e.g., scheduled toileting, prompted voiding, or bladder training) been attempted on admission/entry or reentry or since urinary incontinence was noted in this facility?
0. No → Skip to H0300, Urinary Continence
1. Yes → Continue to H0200B, Response
9. Unable to determine → Skip to H0200C, Current toileting program or trial

Enter Code B. Response - What was the resident's response to the trial program?
0. No improvement
1. Decreased wetness
2. Completely dry (continent)
9. Unable to determine or trial in progress

Enter Code C. Current toileting program or trial - Is a toileting program (e.g., scheduled toileting, prompted voiding, or bladder training) currently being used to manage the resident's urinary continence?
0. No
1. Yes

H0300. Urinary Continence
Enter Code Urinary continence - Select the one category that best describes the resident
0. Always continent
1. Occasionally incontinent (less than 7 episodes of incontinence)
2. Frequently incontinent (7 or more episodes of urinary incontinence, but at least one episode of continent voiding)
3. Always incontinent (no episodes of continent voiding)
9. Not rated, resident had a catheter (indwelling, condom), urinary ostomy, or no urine output for the entire 7 days

H0400. Bowel Continence
Enter Code 0. No
1. Yes

H0600. Bowel Patterns
Enter Code 0. No
1. Yes



The CMS Data Element Library (DEL)

- The DEL is a centralized resource for CMS assessment data elements (e.g., questions and response options), and their related mappings to nationally accepted health IT standards
 - Maintains consistency in format, meaning, and use of Assessment Instrument DE
 - Allows for access to and enables reuse and exchange of data elements
 - Contains no patient level data

CMS.gov
Centers for Medicare & Medicaid Services

Data Element Library

Home Search Reports Help/Resources Feedback

The **CMS Data Element Library (DEL)** is the centralized resource for CMS assessment instrument data elements (e.g. questions and responses) and their associated health information technology (IT) standards.

The DEL does not contain patient health information (PHI).

What is the purpose of the DEL?

- Promotes interoperable health information exchange
- Supports "Patients over Paperwork"
- Assists with standardization of assessment data elements to help facilitate care coordination

What is included in the DEL?

Care Settings	CMS Assessment Instrument
Inpatient Rehabilitation Facilities (IRFs)	IRF Patient Assessment Instrument (IRF-PAI)
Home Health Agencies (HHAs)	Outcome and Assessment Information Set (OASIS)
Long-Term Care Hospitals (LTCHs)	LTCH Continuity Assessment Record and Evaluation (CARE) Data Set (LCDS)
Skilled Nursing Facilities (SNFs)	Minimum Data Set (MDS)
Hospice Care	Hospice Item Set (HIS)
Home and Community-Based Services (HCBS)	Functional Assessment Standardized Items (FASI)

Announcements

- To receive DEL updates, please subscribe to the DEL listserv at following link: [Link DEL Listserv](#)
- **Upcoming DEL Outages:** The Data Element Library will be unavailable at the following times:
 - Friday 6/24/22 8pm ET through Saturday 6/25/22 8pm ET
- The DEL has been updated to include the following new and updated CMS content:
 - [HIS 3.00.0 - effective 1/1/2021](#)
 - [OASIS E-012022 - effective 1/1/2022](#)

Feedback

We appreciate your feedback regarding the DEL site!

[Provide Feedback](#)

Looking for the CMS electronic clinical quality measure (eCQM) Data Element Repository (DERep)? The DERep is an online searchable repository that provides all the data elements and definitions associated with eCQMs used in CMS quality reporting programs by eligible hospitals, critical access hospitals, providers, and clinicians.

DEL Contents

- Assessment and version (e.g., MDS 3.0 v. 1.16)
- Item label (e.g.- GG0170)
- Item status (Published, Active, Inactive)
- Copyright information (if applicable)
- CMS usage (Payment, Quality Measure, Survey and Certification, etc.)
- Identification of skip pattern triggers and lookback periods
- Health IT standards (e.g., LOINC, SNOMED)

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

Source: CMS DCPAC

Standardized PAC Assessment Items Relevant to Dementia

Cognitive Patterns and Communication	FASI	HH	IRF	LTCH	SNF
BB0700. Expression of Ideas and Wants BB0800. Understanding Verbal and Non-Verbal Content	-	-	X	-	-
B0700. Makes Self Understood B0800. Ability to Understand Other	-	-	-	-	X
Brief Interview of Mental Status (BIMS) C0200. Repetition of Three Words C0300. Temporal Orientation C0400. Recall C0500. BIMS Score	-	x	X	X	X
Staff assessment for mental status C0700. Short-term Memory OK C0800. Long-term Memory OK	-	-	-	-	X
Staff assessment for mental status cont'd C0900. Memory/Recall Ability	-	-	X	-	X
C1000. Cognitive Skills for Daily Decision Making	-	-	-	-	X
M1700. Cognitive Functioning M1710. When Confused M1720. When Anxious	-	X	-	-	-
C1310. Signs and Symptoms of Delirium (from CAM)	-	X	X	X	X



Office of the National Coordinator for Health Information Technology (ONC) Policies that are Enabling Health Information Exchange

Brenda Akinragbe
Policy Analyst



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ONC – HealthIT.gov

 Official Website of The Office of the National Coordinator for Health Information Technology (ONC)



TOPICS ▾ BLOG NEWS ▾ DATA ABOUT ONC ▾ 



The banner features a central graphic with a blue and yellow star icon and the text 'USCDI' in a dark blue arrow shape. Below this, it reads 'United States Core Data for Interoperability' and 'DRAFT VERSION 4 (JANUARY 2023)'. The background is a colorful mosaic of squares in shades of blue, red, and yellow, with some faint text like 'PHARMA' and 'SUNSHINE' visible.


JANUARY 2023

Read and comment on the USCDI Draft Version 4 by April 17, 2023

[Learn More](#)

- 1
- 2
- 3
- 4





Lessons Learned and Recommendations for Optimizing the Use of Standardized Cognitive and Functional Decline Data across the Healthcare Ecosystem

Terry O'Malley, MD
Corresponding Faculty





*The Road to
Interoperability*

IMPACT Act

SNOMED and LOINC
Data Element Library (DEL)

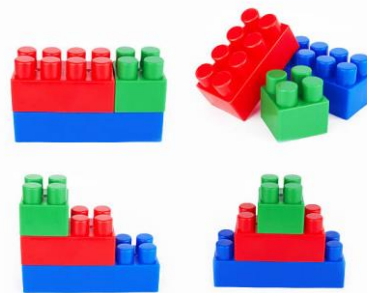
PACIO-HL7

USCDI

Value Set Authority Center (VSAC)

Interoperability Standards Advisory (ISA)

LEGOs



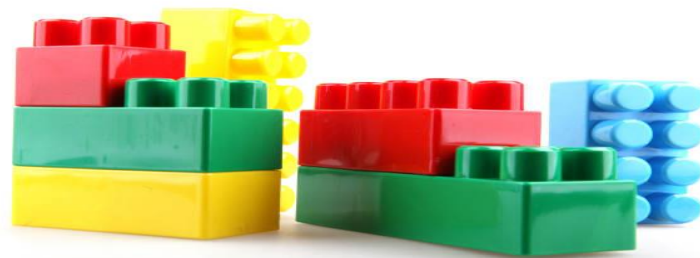
Same Data-Two Uses

Home Health Aide Report

- Observations of function and cognition
- Manage populations at high risk for hospitalization
- Proactive interventions
- Reduce hospitalizations
- Success under Value Based Payment

Transitions of Care

- Establish continuity of shared care plan
- Observations of function and cognition
- Other essential data: SDOH, Goals, Preferences, and Priorities (GPPs)





Recommendations

- Establish standards for Transitions of Care (ToC)
 - Content
 - Timeliness
 - Usability
- Create quality measures to drive ToC improvement
- Expand the standardized vocabulary

Case Study on the Use of Interoperable Data to Facilitate Care Coordination and Optimize Population Health

Constantine Lyketsos, MD, MHS, FACLP, FACPsych, FACNP

Physician



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