



Newborn Hearing Screening Electronic Clinical Quality Measure: EHDI eCQM

EARLY HEARING DETECTION & INTERVENTION MEETING
March 15, 2016 • San Diego, CA

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Child Development and Disability Branch
Division of Human Development and Disability
National Center on Birth Defects and Developmental Disabilities
U.S. Centers for Disease Control and Prevention



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Why Measure Performance?



When something gets measured,
.....it improves the chances it gets done;
when those doing it receive feedback about its measurement,
.....it improves the chances it gets done better; and
when those doing it well get rewarded,
.....it improves the chances it gets repeated

MACRA

- Medicare Access and CHIP Reauthorization Act of 2015

Physician Payment Timeline

2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Anticipated annual baseline payment updates-As provided by MACRA (Note: Updates are cumulative.)									
Jul-Dec +0.5	+0.5% ^a	+0.5%	+0.5%	+0.5%	0%	0%	0%	0%	0%
Current law: PQRS, MU, VBPM									
Penalty up to -3.5%	Penalty up to -6%	Penalty up to -9%	Penalty TBD						
				Merit-Based Incentive Payment System (MIPS) Adjustments made on sliding scale based on performance in prior time period TBD					
				Baseline payment adjustment ^b	(-/+) 4%	(-/+) 5%	(-/+) 7%	(-/+) 9%	(-/+) 9% ^c
				Maximum payment adjustment for high performers	+12%	+15%	+21%	+27%	+27% ^c
				Exceptional performers may be eligible for an additional positive payment adjustment of up to 10%. ^d					
				Alternative Payment Models (APMs) 5% annual bonus – Paid in lump sum Participants are exempt from MIPS.					

Legend

MU = Meaningful use
 PQRS = Physician Quality Reporting System
 VBPM = Value-Based Payment Modifier
 RVU = Relative Value Unit

Clarification

- The Joint Commission (www.jointcommission.org)
 - accredits and certifies health care organizations and programs in the United States
- Joint Committee on Infant Hearing (www.jcih.org)
 - publishes preferred recommended practice in early identification and appropriate intervention of newborns and infants at risk for or with hearing loss

Joint Committee (JCIH) Representatives

- Alexander Graham Bell Association for the Deaf and Hard of Hearing
- American Academy of Audiology
- American Academy of Otolaryngology and Head and Neck Surgery
- American Academy of Pediatrics
- American Speech Language Hearing Association
- Council on Education of the Deaf
- Directors of Speech and Hearing Programs in State Health and Welfare Agencies

JCIH Quality Indicators - Screening

2000 Position Statement:

- 1) screened during the birth admission
- 2) screened before 1 month of age
- 3) did not pass
- 4) return for follow-up services
- 5) referred for evaluation
- 6) families refuse screening

2007 Position Statement:

- 1) complete screening by 1 month of age (age correction for preterm infants is acceptable)
- 2) fail initial screening and fail any subsequent rescreening before comprehensive audiological evaluation

JCIH Quality Indicators - Diagnostics

2000 Position Statement:

- 1) care is coordinated between the medical home and related professionals
- 2) evaluations before age 3 months
- 3) referred for otologic evaluation
- 4) families who accept audiologic and medical evaluation services
- 5) signed IFSP by age 6 months

2007 Position Statement:

- 1) complete a comprehensive audiological evaluation by 3 months of age
- 2) for families who elect amplification, the percentage of infants with confirmed bilateral hearing loss who receive amplification devices within 1 month of confirmation of hearing loss

JCIH Quality Indicators - Intervention

2000 Position Statement:

- 1) enrolled before age 6 months
- 2) enrolled in program with knowledgeable professional personnel (development, communication needs & intervention options)
- 3) receive language evaluations at 6-month intervals
- 4) language levels commensurate with hearing peers
- 5) achieve IFSP outcomes

2007 Position Statement:

- 1) for infants with confirmed hearing loss who qualify for Part C services, the percentage for whom parents have signed an IFSP by no later than 6 months of age
- 2) for children with acquired or late-identified hearing loss, the percentage for whom parents have signed an IFSP within 45 days of the diagnosis

JCIH Quality Indicators - Intervention

2000 Position Statement:

- 6) when agreed on by the family, amplification within 1 month of confirmation
- 7) audiologic amplification monitoring every 3 months
- 8) number of amplification follow-up visits within the 1st year
- 9) families who refuse early intervention services
- 10) families who participate in & express satisfaction with self-advocacy

2007 Position Statement:

- 3) infants with confirmed hearing loss who receive the first developmental assessment with standardized assessment protocols for language, speech, and nonverbal cognitive development by no later than 12 months of age

CY 1999–2004: DSHPSHWA

Directors of Speech and Hearing Programs in State Health and Welfare Agencies

1999 DSHPSHWA Data Reporting Form

State Reporting: _____

Reporting Year: _____

Number of Birthing Hospitals: _____ Number of Birthing Hospitals with UNHS: _____

=====

1) Number of Live Births: _____

2) Number of Infants Screened: _____

a) Prior to Discharge: _____ b) After discharge, before 1 month: _____

3) Number of Infants Referred for Audiologic Evaluation: _____

4) Number of Infants who Received Audiologic Evaluation By 3 Months of Age: _____

5) Number of Children Identified With Permanent Congenital Hearing Loss in Reporting Year: _____

UNILATERAL HEARING LOSSES:

SENSORINEURAL				CONDUCTIVE		MIXED			
Mild	Moderate	Severe	Profound	Mild	Moderate	Mild	Moderate	Severe	Profound

BILATERAL HEARING LOSSES:

SENSORINEURAL				CONDUCTIVE		MIXED			
Mild	Moderate	Severe	Profound	Mild	Moderate	Mild	Moderate	Severe	Profound

6) Median, Average and Age Range at Diagnosis of Children with Permanent Congenital Hearing Loss

a) Median Age (months): _____ b) Average Age Months): _____

c) Minimum Age (Months): _____ d) Maximum Age (Months): _____

7) Number of Children with PCHL Receiving Intervention by 6 Months: _____

CY 1999–2004: DSHPSHWA

Summary of Infants Screened, Diagnosed, and Enrolled in Early Intervention, 1999 – 2004

Year	% Screened	% Diagnosed*	% Diagnosed Before Three Month of Age**	% Diagnostic LFU/LTD	# Number with Hearing Loss	% of Infants w. Hearing Loss Enrolled in EI	% of Infants Receiving EI Enrolled Before Six Months**
1999	46.5 (660,639) (n=22)	N/A	51.8 (4,221) (n=8)	48.2 (3,924) (n=8)	282 (n=9)	N/A	N/A
2000	52.1 (1,496,014) (n=44)	56.3 (10,124) (n=23)	77.6 (3,931) (n=11)	43.7 (7,859) (n=23)	855 (n=25)	83.7 (590) (n=17)	75.6 (446) (n=17)
2001	65.4 (2,115,869) (n=48)	55.7 (11,901) (n=27)	78.2 (4,622) (n=14)	44.3 (9,476) (n=27)	2,541 (n=35)	65.0 (891) (n=27)	69.7 (579) (n=24)
2002	82.9 (2,941,115) (n=47)	40.4 (17,254) (n=35)	69.5 (7,899) (n=26)	59.6 (25,469) (n=35)	2,553 (n=37)	64.0 (1,137) (n=30)	64.9 (531) (n=25)
2003	88.1 (3,417,964) (n=50)	55.2 (20,083) (n=37)	81.7 (10,671) (n=31)	44.8 (16,309) (n=37)	2,899 (n=44)	65.6 (1,702) (n=38)	67.4 (1,064) (n=35)
2004	91.8 (3,496,452) (n=49)	48.7 (25,376) (n=41)	75.7 (14,909) (n=36)	51.3 (26,704) (n=41)	3,600 (n=47)	65.3 (1,859) (n=40)	69.9 (1,277) (n=38)

Curry and Gaffney (2010)

www.cdc.gov/ncbddd/hearingloss/documents/1999-2004_dshpshwa-summary.pdf

CY 2005 - 2014: CDC

Hearing Screening and Follow-up Survey (HSFS)

OMB No. 0920-0733
Exp. Date: 08/31/2016

Part 1: Screening, Diagnostic, and Intervention Data	
Calculate Totals (yellow fields)	
2013 Documented Hearing Screening Data	
Total Occurrent Births	
Total Occurrent Births According to Vital Records	
<i>Optional: Number of infants in the NICU >30 days?</i>	
<i>Optional: Total Occurrent Births at Military Facilities According to Vital Records (enter "none" if there are no military hospitals)</i>	
<i>Optional: Total Occurrent Births at Military Facilities with Hearing Screening Results Reported to the EHDI Program (enter "none" if there are no military hospitals)</i>	
Hearing Screening	
Total Documented as Screened	(automatically calculated)
Passed (most recent/final screen)	
Total Pass	(automatically calculated)
Pass Before 1 Month of Age	
Pass After 1 month but Before 3 Months of Age	
Pass After 3 Months of Age	
Pass: Age Unknown	
<i>Optional: NICU Infants (>30 days): Pass</i>	
Not Passed (most recent/final screen)	
Total Not Pass	(automatically calculated)
Not Pass Before 1 Month of Age	
Not Pass After 1 month but Before 3 Months of Age	
Not Pass After 3 Months of Age	
Not Pass: Age Unknown	
<i>Optional: NICU Infants (>30 days): Not Pass</i>	
Optional: Inpatient (IP) /Outpatient (OP) Screening Protocol Only	
Not Pass IP screen and did <u>not</u> Receive an OP Screen	
No Documented Hearing Screening	
Total Documented as Not Screened	(automatically calculated)
Infant Died	
Non-resident	
Unable to be Screened due to Medical Reasons	
Parents / Family Declined Services	
Infant Transferred and No Documentation of Screening	
Missed	
Unknown	
Total Occurrent Births*	(automatically calculated)

CY 2013

CDC HSFS: Diagnostic Data

2013 Documented Diagnostic Data	
Total Not Pass Screening	(from Screening section)
No Documented Hearing Loss	
Total with No Hearing Loss	
No Hearing Loss Before 3 Months of Age	
No Hearing Loss After 3 Months but Before 6 Months of Age	
No Hearing Loss After 6 Months of Age	
No Hearing Loss Documented: Age Unknown	
Documented Permanent Identified (ID) Hearing Loss	
Total Hearing Loss	(automatically calculated)
Hearing Loss ID: Before 3 Months of Age	
Hearing Loss ID After 3 Months but Before 6 Months of Age	
Hearing Loss ID After 6 Months of Age	
Hearing Loss ID: Age Unknown	
No Documented Diagnosis / Undetermined	
Total with No Diagnosis	(automatically calculated)
Audiologic Diagnosis in Process (Awaiting Diagnosis)	
Requirement: Only infants seen at least one time and have a follow-up appointment scheduled	
Non-resident	
Moved Out of Jurisdiction	
Infant Died	
Unable to Receive Diagnostic Testing due to Medical Reasons	
PCP did not Refer Infant for Diagnostic Testing	
Parents / Family Declined Services	
Parent / Family Contacted but Unresponsive	
Unable to Contact	
Unknown	
Total Not Pass*	(automatically calculated)
Optional: Other Documented Cases of ID Hearing Loss	
Cases of non-permanent, transient hearing loss ID	
Permanent cases of hearing loss among infants reported as Non-Residents	
Permanent cases of hearing loss among infants that are residents but were born in a different jurisdiction	

CDC HSFS: Intervention Data

2013 Documented Intervention Data	
Total Cases Hearing Loss	<i>(from Diagnostic section)</i>
Referrals to Part C Early Intervention (EI)	
Total Referrals to Part C EI	<i>(automatically calculated)</i>
Referred and Eligible for Part C EI	
Referred and Not Eligible for Part C EI	
Referred but Eligibility Unknown	
Not Referred to Part C EI and Unknown	
<i>Optional:</i> Referred to Part C EI Before Six Months of Age	
Total Referred, Not Referred, and Unknown	<i>(automatically calculated)</i>
Enrolled in Part C EI <i>(based on signed IFSP)</i>	
Total Enrolled in Part C EI	<i>(automatically calculated)</i>
Enrolled Before 6 Months of Age	
Enrolled After 6 Months but Before 12 Months of Age	
Enrolled After 12 Months of Age	
Enrolled: Age Unknown	
Monitoring Services	
Receiving Only Monitoring Services	
Receiving <u>ONLY</u> Intervention Services from Non-Part C EI	
Total from Non-Part C EI Services Only	<i>(automatically calculated)</i>
Services Before 6 Months of Age	
Services After 6 Months but Before 12 Months of Age	
Services After 12 Months of Age	
Services: Age unknown	
No Intervention Services	
Total No Services	<i>(automatically calculated)</i>
Not Eligible for Part C Services	
Infant Died	
Parents / Family Declined Services	
Non-resident	
Moved Out of Jurisdiction	
Parent / Family Contacted but Unresponsive	
Unable to Contact	
Unknown	
Total Intervention & No Services*	<i>(automatically calculated*)</i>

CY 2013

CDC HSFS: Type & Severity Data

Part 2: Type and Severity of Identified Hearing Losses (By Ear)
ASHA System

Note: Only report Part 2 data using either the DSHPSHWA or ASHA system – do not use both

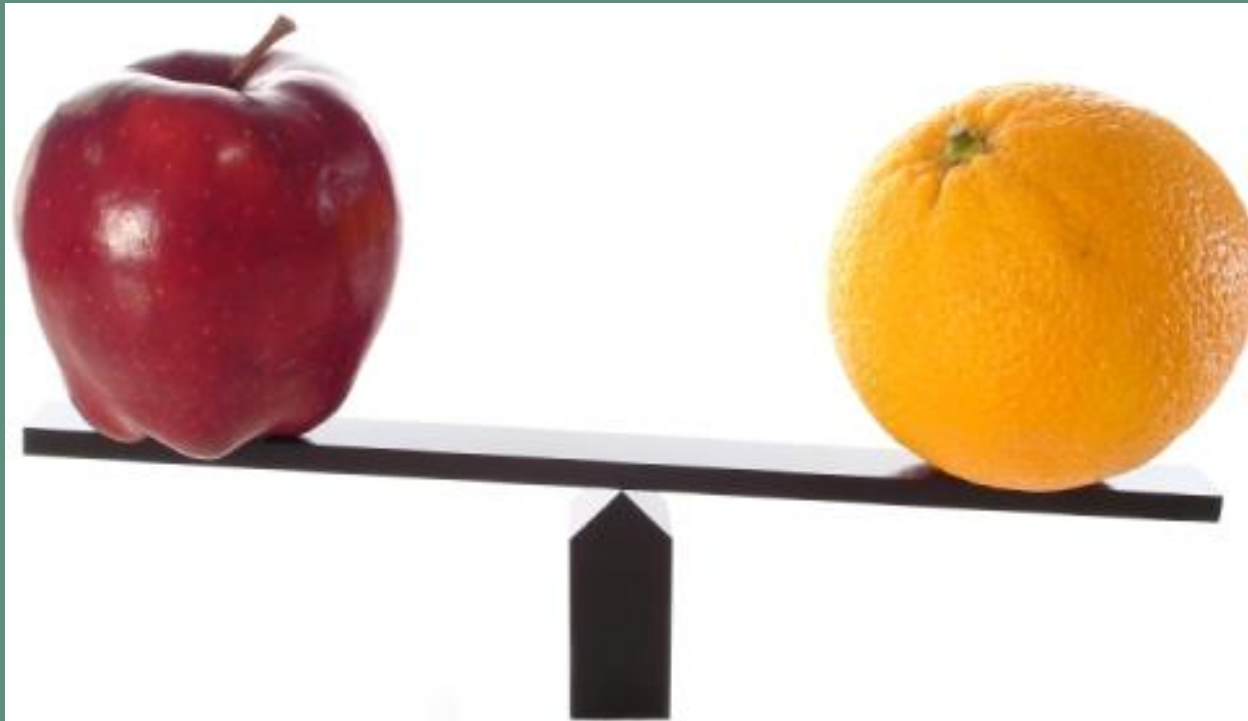
Total Permanent Hearing Loss (from Part 1 Diagnostic section)

		BILATERAL			UNILATERAL			LATERALITY UNKNOWN (for Cases where it is unknown if the loss is unilateral or bilateral)
		RIGHT EAR	LEFT EAR	UNKNOWN EAR (Note: record degree of loss for <u>each</u> ear)	RIGHT EAR	LEFT EAR	UNKNOWN EAR	
Sensorineural	Slight							
	Mild							
	Moderate							
	Moderately Severe							
	Severe							
	Profound							
	Unknown Severity							
Conductive	Slight							
	Mild							
	Moderate							
	Moderately Severe							
	Severe							
	Profound							
	Unknown Severity							
Mixed	Slight							
	Mild							
	Moderate							
	Moderately Severe							
	Severe							
	Profound							
	Unknown Severity							
Type Unknown	Slight							
	Mild							
	Moderate							
	Moderately Severe							
	Severe							
	Profound							
	Unknown Severity							
Auditory Neuropathy	Slight							
	Mild							
	Moderate							
	Moderately Severe							
	Severe							
	Profound							
	Unknown Severity							
Totals by Ear								
Totals by Child								
		Total Cases Resolved (i.e., change from hearing loss to no hearing loss)						
		Overall Total*						(automatically calculated*)

CDC HSFS: Demographic Data

Part 3: Demographics													
	Screening Demographics				Diagnostic Demographics			Intervention Demographics			Finalize		
	Total Occurrent Births	Total Pass	Total Pass Before 1 Month	Total Not Pass	Total Not Pass Before 1 Month	Normal Hearing	Normal Hearing Before 3 Months	Hearing Loss	Hearing Loss Before 3 Months	Total Enrolled In Part C EI	Total Enrolled In Part C EI Before 6 Months	Total Services Non-Part C EI	Total Services Non-Part C EI Before 6 Months
Totals (from Part 1)													
Sex													
Male													
Female													
Unknown													
Totals (auto calculated)													
Maternal Age													
< 15 years													
15-19 years													
20 - 24 years													
25-34 years													
35 - 50 years													
> 50 years													
Unknown													
Totals (auto calculated)													
Mother's Education													
Less than High School													
High School Graduate or GED													
Some College or AA/AS degree													
College Graduate or above													
Unknown													
Totals (auto calculated)													
Maternal Ethnicity													
Hispanic or Latino													
Not Hispanic or Latino													
Unknown													
Totals (auto calculated)													
Maternal Race													
White (Not Hispanic)													
White (Hispanic)													
White (Ethnicity Unknown)													
Black or African American (Not Hispanic)													
Black or African American (Hispanic)													
Black or African American (Ethnicity Unknown)													
Asian													
Native Hawaiians & other Pacific Islanders													
American Indian & Alaska Natives													
Unknown													
Totals (auto calculated)													

What are we measuring?



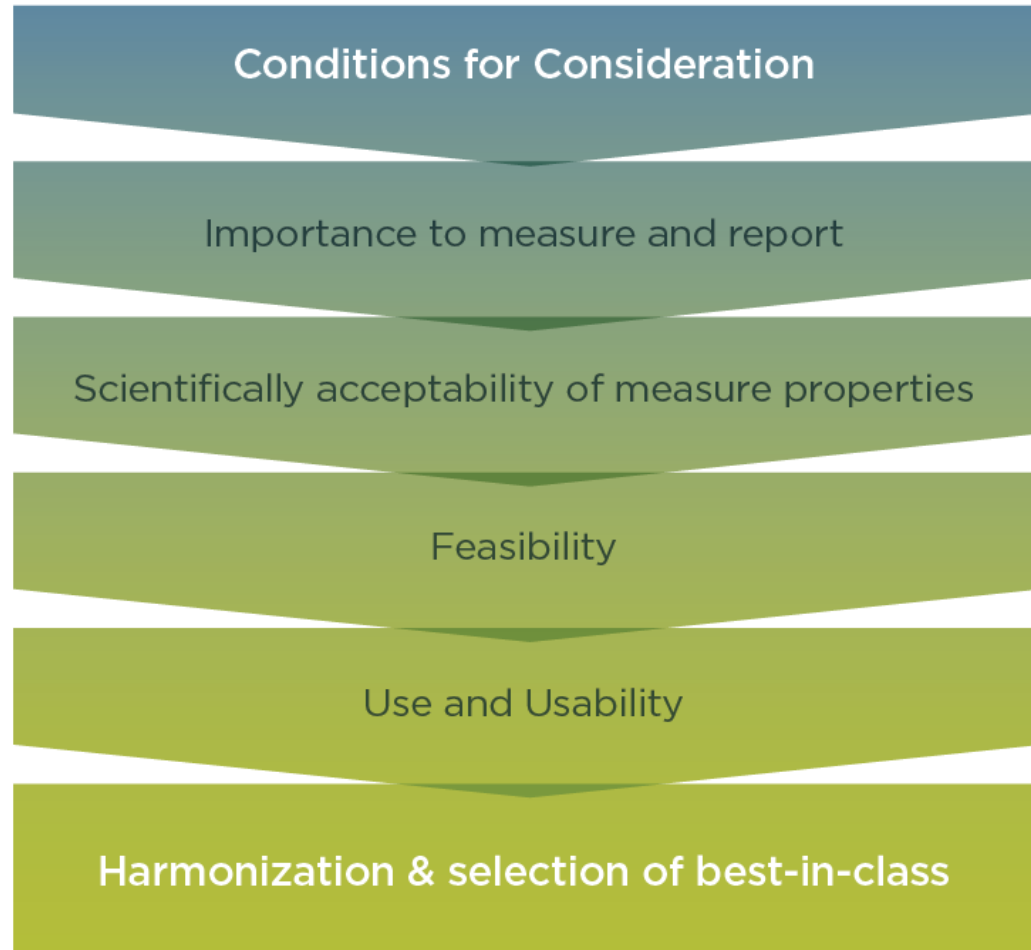
National Quality Forum (NQF)

Why NQF Endorsement?

- The rigor and consensus process makes it the nation's “gold standard” for healthcare measurement
- Evaluated by independent field experts and other stakeholders: patients, providers, and payers
- Measures are evaluated on standardized criteria



NQF Measure Evaluation Criteria



NQF Measure Endorsement Process



July 2010

August 2010

October 2010

Feb – March 2011

Apr– May 2011

June 2011

August 2011

2011: NQF EHDI Endorsement

Child Health Quality Measures

#1354: Hearing screening prior to hospital discharge

#1360: Audiological evaluation no later than 3 months of age

#1361: Intervention no later than 6 months of age

#1357: Outpatient hearing screening of infants who did not complete screening before hospital discharge*

*Time limited endorsement

2015: NQF EHDI Re-Endorsement

Data Source: CDC HSFS

#1354: Hearing screening prior to hospital discharge

#1360: Audiological evaluation no later than 3 months of age

#1361: Signed Part C Individual Family Service Plan (IFSP) before 6 months of age

2015: NQF EHDI eMeasure

1354 eMeasure Hearing screening prior to hospital discharge

[Submission](#) | [Specifications](#)

Description: This measure assesses the proportion of births that have been screened for hearing loss before hospital discharge.

Numerator Statement: All live births during the measurement time period born at a facility and screened for hearing loss prior to discharge, or not being screened due to medical reasons or medical exclusions.

Denominator Statement: All live births discharged during the measurement time period born at a facility

Exclusions: Patient deceased prior to discharge and has not received hearing screening.

Adjustment/Stratification:

Level of Analysis: Facility, Population : National, Population : State

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Process

Data Source: Electronic Clinical Data : Electronic Health Record

Measure Steward: Centers for Disease Control and Prevention

Harmonized with NQF #480 and #716

eMeasures: EHDI Benefits

Role in Quality Measurement:

- Creates a standard common language across all healthcare stakeholders so quality measurement data can be precisely and more accurately collected and reported
- Improves the timeliness and reduces the burden for reporting (program accountability, payment, public health, and comparative effectiveness)
- Improves health care through access to more comprehensive, and accurate performance information



Human Readable: Measure Logic

Population criteria

- **Initial Patient Population** =
 - AND: "Diagnosis, Active: Livebirth (ordinality: 'Principal Diagnosis')" starts during "Occurrence A of Encounter, Performed: Inpatient Encounter"
 - AND: "Occurrence A of Encounter, Performed: Inpatient Encounter (reason: 'Birth')" during "Measurement Period"
 - AND: "Diagnosis, Active: Liveborn Born In Hospital" starts during "Occurrence A of Encounter, Performed: Inpatient Encounter"
- **Denominator** =
 - AND: "Initial Patient Population"
- **Denominator Exclusions** =
 - AND NOT:
 - OR: "Diagnostic Study, Result: Hearing Examination"
 - OR: "Diagnostic Study, Result: Newborn Hearing Screen Left"
 - OR: "Diagnostic Study, Result: Newborn Hearing Screen Right"
 - during "Occurrence A of Encounter, Performed: Inpatient Encounter"
 - AND: "Patient Characteristic Expired: Patient Expired" during "Occurrence A of Encounter, Performed: Inpatient Encounter"
- **Numerator** =
 - AND:
 - OR: "Diagnostic Study, Result not done: Medical Reasons" for "Newborn Hearing Screen Left LOINC Value Set"
 - OR: "Diagnostic Study, Result not done: Medical Reasons" for "Newborn Hearing Screen Right LOINC Value Set"
 - OR: "Diagnostic Study, Result: Hearing Examination"
 - OR: "Diagnostic Study, Result not done: Medical Reasons" for "Hearing Examination SNOMED-CT Value Set"
 - OR:
 - AND: "Diagnostic Study, Result: Newborn Hearing Screen Left (result: 'Pass Or Refer')"
 - AND: "Diagnostic Study, Result: Newborn Hearing Screen Right (result: 'Pass Or Refer')"
 - during "Occurrence A of Encounter, Performed: Inpatient Encounter"
- **Denominator Exceptions** =
 - None

Data criteria (QDM Data Elements)

- "Diagnosis, Active: Livebirth" using "Livebirth SNOMED-CT Value Set (2.16.840.1.114222.4.1.214079.1.1.1)"
- "Diagnosis, Active: Liveborn Born In Hospital" using "Liveborn Born In Hospital SNOMED-CT Value Set (2.16.840.1.113883.3.117.1.7.1.29)"
- "Diagnostic Study, Result: Hearing Examination" using "Hearing Examination SNOMED-CT Value Set (2.16.840.1.114222.4.1.214079.1.1.2)"
- "Diagnostic Study, Result: Newborn Hearing Screen Left" using "Newborn Hearing Screen Left LOINC Value Set (2.16.840.1.114222.4.1.214079.1.1.3)"
- "Diagnostic Study, Result: Newborn Hearing Screen Right" using "Newborn Hearing Screen Right LOINC Value Set (2.16.840.1.114222.4.1.214079.1.1.4)"
- "Diagnostic Study, Result not done: Medical Reasons" using "Medical Reasons SNOMED-CT Value Set (2.16.840.1.114222.4.1.214079.1.1.7)"
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- "Encounter, Performed: Inpatient Encounter" using "Inpatient Encounter SNOMED-CT Value Set (2.16.840.1.113883.3.117.1.7.1.23)"
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- Attribute: "Result: Pass Or Refer" using "Pass Or Refer SNOMED-CT Value Set (2.16.840.1.114222.4.1.214079.1.1.6)"

Reporting Stratification

- None

Supplemental Data Elements

Machine Readable: Measure Logic

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Extensible Markup Language (XML)

BONNIE Testing Tool

BONNIE

[LOGIN](#)

A tool for testing electronic clinical quality measures

[LEARN MORE](#)

**streamlined and
efficient**



pretesting for eQMs

**developer
empowerment**



provides specific feedback on the
behavior of the CQM logic

**meaningful use
support**



supports the Meaningful Use (MU)
Program

Bonnie is a tool for testing electronic clinical quality measures (eQMs) designed to support streamlined and efficient pre-testing of eQMs, particularly those used in the Meaningful Use (MU) program.

EHDI BONNIE Testing

Eye Care and Ear, Nose and Throat (EENT) Standing Committee

Summary of Test Data:

Cataract Surgery, Glaucoma: Optic Nerve Evaluation, Diabetic Retinopathy, Hearing Screening

Measure Number	Patient Test Bank	Percentage Test Coverage	Patient Details	Measurement Details	Data Criteria Details	Risk Adjustment Details	Percent Successful	Testing Summary Results Capture All Data
0565	22	15%	Y	Y	Y	N/A	100%	Y
0564	20	23%	Y	Y	Y	N/A	100%	Y
0086	19	100%	Y	Y	Y	N/A	100%	Y
0088	20	100%	Y	Y	Y	N/A	100%	Y
0089	24	95%	Y	Y	Y	N/A	100%	Y
1354	17	100%	Y	Y	Y	N/A	100%	Y

NQF #1354: 17 synthetic test patient records

Centers for Medicare & Medicaid Services (CMS)

Electronic Health Record (EHR) Incentive Program:

6.1.4 Measure 31v1: Hearing Screening Prior to Hospital Discharge (EHDI-1a), NQF 1354, EHDI_1a_HearScreen

The measurement period is one calendar year but the reporting period is jurisdictionally defined.

The logic phrase AND: “Occurrence A of Encounter, Performed: Inpatient Encounter (reason: 'Birth')” intends to capture admission type of newborn for the encounter. Where this information is available in existing EHR structured fields (e.g. data that is fed to UB 04, field location 14), it can be used to map the criterion specified in the logic.

The logic phrase AND: “Diagnosis, Active: Liveborn Born In Hospital” starts during “Occurrence A of Encounter, Performed: Inpatient Encounter” intends to capture the point of origin for the inpatient admission. Where this information is available in existing EHR structured fields (e.g. data that is fed to UB-04, field location 15), it can be used to map the criterion specified in the logic.

HQMF and QRDA

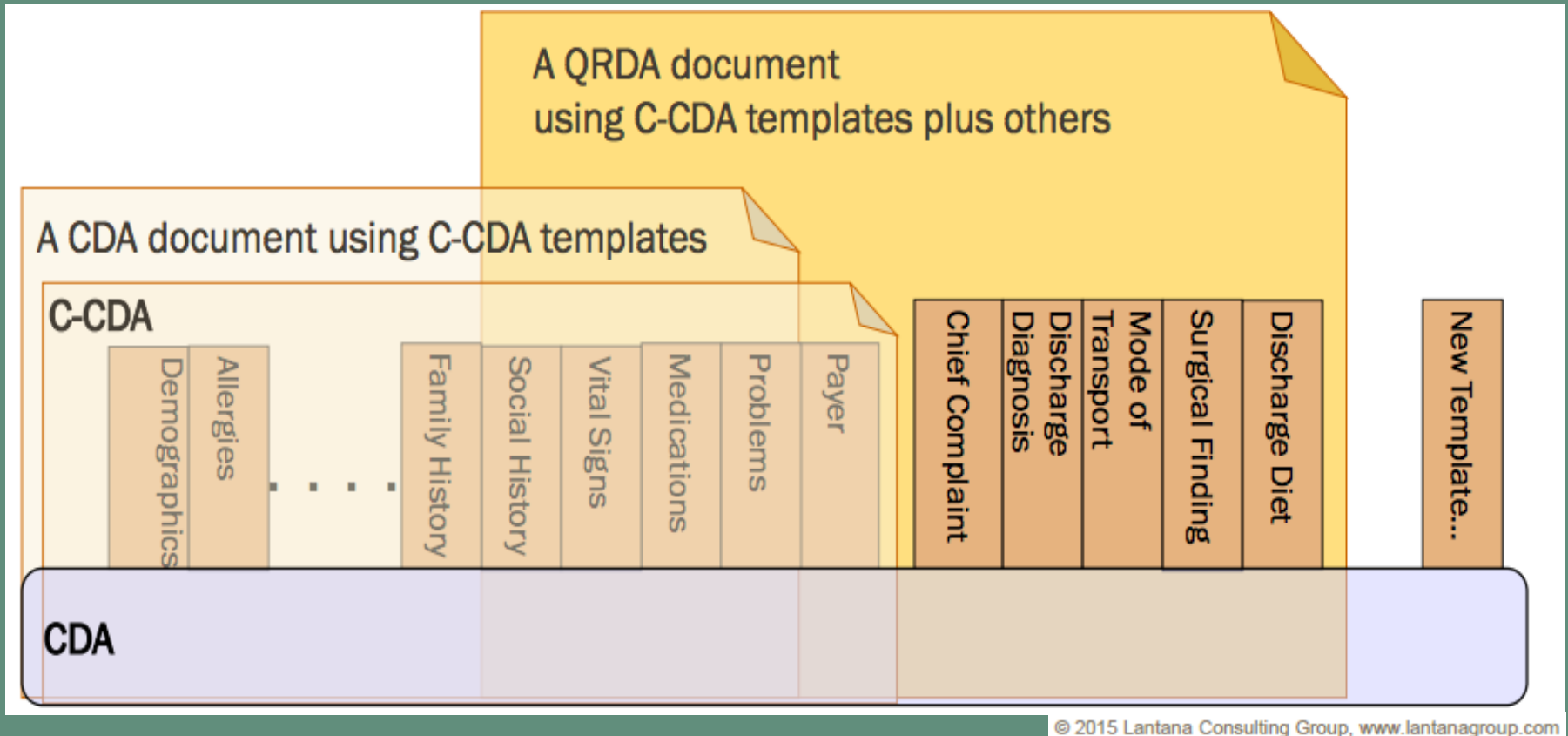
Specification	Definition	Standard
Query Format	The content and structure in which a <u>query is constructed</u>	Health Quality Measures Format (HQMF)
Results Format	The content and structure in which a <u>result is reported</u>	Quality Reporting Document Architecture (QRDA)

HQMF is a Health Level Seven (HL7) standard for representing health quality measures as an electronic document that is machine readable

QRDA is a HL7 standard document structure format to report quality measures



QRDA and CDA



- Clinical Document Architecture (CDA) is a HL7 base standard for electronic clinical documents
- QRDA is a HL7 CDA standard designed to have the data elements necessary for quality measurement

QRDA Category I / QRDA Category III

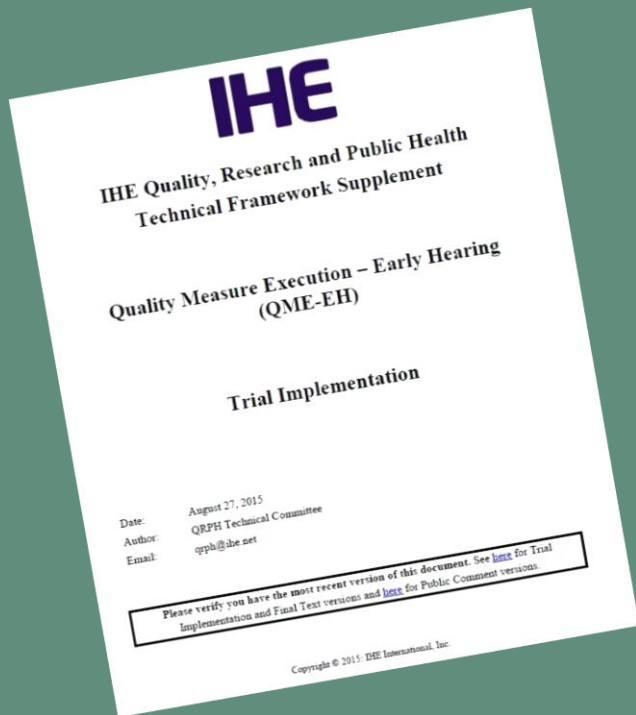
Category I report:

- contains quality data extracted on a single patient from an electronic health record (EHR) or other information technology system
- one or multiple measures to be reported
- submitted for each patient who meets the Initial Patient Population criteria of an eCQM

Category III report:

- aggregate results on multiple patients
- summary data for one or more measures

Quality Measure Execution – Early Hearing (QME – EH)



“how to” reuse data from a standard C-CDA Summary of Care Document generated by an EHR to create a patient-level quality report (QRDA Category 1)

“how to” create and consume an aggregate-level quality measure report (QRDA Category 3) from multiple patient-level quality reports

Published August, 2015
Integrating the Healthcare Enterprise® (IHE)
Quality, Research and Public Health (QRPH)

HL7 Quality Reporting Document Architecture (QRDA)

Machine Readable: Care Record

```
<?xml version="1.0"?>
<ClinicalDocument xmlns="urn:hl7-org:v3" moodCode="EVN" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <typeId extension="POCD_HD000040" root="2.16.840.1.113883.1.3"/>
  <templateId root="2.16.840.1.113883.3.27.1776"/>
  <id extension="c266" root="2.16.840.1.113883.19.4"/>
  <code displayName="conifer health solutions" codeSystemName="LOINC" codeSystem="2.16.840.1.113883.6.1" code="11488-4"/>
  <title>HL7: JOHN EICHWALD</title>
  <effectiveTime value="20160315104542"/>
  <confidentialityCode codeSystem="2.16.840.1.113883.5.25" code="N"/>
  <setId extension="BB35" root="2.16.840.1.113883.19.7"/>
  <versionNumber value="2"/>
  - <recordTarget contextControlCode="OP" typeCode="RCT">
    - <patientRole classCode="PAT">
      - <patient classCode="PSN" determinerCode="INSTANCE">
        - <name>
          <given/>
          <family/>
        </name>
      </patient>
    </patientRole>
  </recordTarget>
  - <component>
    - <structuredBody moodCode="EVN" classCode="DOCBODY">
      <component/>
    - <component>
      - <section moodCode="EVN" classCode="DOCSECT">
        <code displayName="LOINC" codeSystem="2.16.840.1.113883.6.1" code="11496-7"/>
        <title>Procedures</title>
        <text mediaType="text/x-hl7-text+xml"/>
      - <entry>
        - <procedure moodCode="INT" classCode="PROC">
          <code displayName="PRP I/HERN INIT REDUC >5 YR" codeSystemName="" codeSystem="" code="0"/>
          <effectiveTime value="20151009000000"/>
          - <performer>
            - <assignedEntity classCode="ASSIGNED">
              - <assignedPerson classCode="PSN" determinerCode="INSTANCE">
                <name>Kramer, Andrew A. (562607203)</name>
              </assignedPerson>
            </assignedEntity>
          </performer>
        </procedure>
      </entry>
    - <entry>
```

Extensible Markup Language (XML)

Human Readable: Care Record

Personal Health Record: JOHN G EICHWALD

SECTIONS

Appointments
Emergency Contacts
Family History
Personal History
Allergies
Immunizations/Vaccines
Radiologic Procedures
Medical Procedures
Emergency Room Visits
Hospital Admissions
Prescription History
Physician Office Visits
Primary Health Indicators
Other Clinical Lab Tests
Preventive Screenings
Document Management

Notice of Privacy Practices

My Information as of: 3/14/2016 10:43:37 AM [?](#)

Name: JOHN G EICHWALD ID: [REDACTED] Gender: M Age: 64 Birth Date: 05/14/1951

Address: [REDACTED] Plan: Standard Option - Family
SNELLVILLE, GA 30078-2274

Contact Numbers: Home: [REDACTED] Office: NOT ON FILE

Email Address:
Contact Guideline:

My Primary Doctor:
Contact Number: [REDACTED]

My Personal Health Nurse:
Contact Number: [REDACTED]

* To Edit or Update your personal information, please talk to your Human Resources or Benefits Manager.

Appointments [Add New Appointment](#)

Date	Time	Provider	Address	Phone #	Comments
------	------	----------	---------	---------	----------

No Appointments found or added!

[Back to Top](#)

Emergency Contacts [Add New Contact](#)

First Name	Last Name	Relationship	Phone #	Alt Phone #
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[Edit](#) [Delete](#)

[Back to Top](#)

Family History [Add New Entry](#)

Family Member	Date of Birth	Disease(s)/Condition (s)	Living	Cause of Death	Age of Death
---------------	---------------	--------------------------	--------	----------------	--------------

No Family History added!

[Back to Top](#)

Personal History [Add New Entry](#)

Description	Start Date	End Date	Comments
-------------	------------	----------	----------

Routine exam	10/01/2013	10/27/2015	
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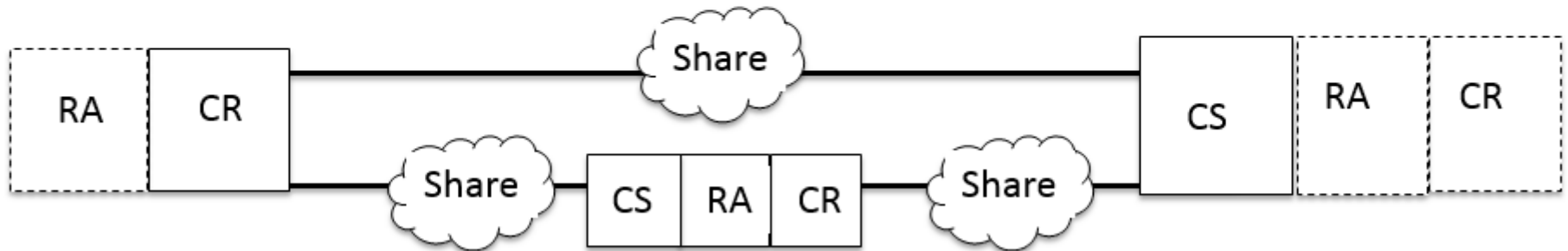
Exposure to immunizations incident to other procedures, procedure	10/27/2015	10/27/2015	
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QME – EH

IHE “Actors”

- Content Creator
- Content Consumer
- Report Assembler

Content Creator = CR
Report Assembler = RA
Content Consumer = CS



The Joint Commission

the nation's oldest and largest standards-setting and accrediting body in health care:

- evaluates and accredits almost 21,000 health care organizations and programs in the United States, including 4,000 hospitals
- awards Disease Specific Care certification to more than 2,000 programs

2016 eMeasure Sets

Measure Label	Measure Name
eAMI-7a	Fibrinolytic Therapy Received Within 30 Minutes of Hospital Arrival
eAMI-8a	Primary PCI Received Within 90 Minutes of Hospital Arrival *
eCAC-3	Home Management Plan of Care (HMPC) Document Given to Patient/Caregiver
eED-1a	Median Time from ED Arrival to ED Departure for Admitted ED Patients-Overall Rate
eED-1b	Median Time from ED Arrival to ED Departure for Admitted ED Patients-Not Psychiatric/Mental Health Patients
eED-1c	Median Time from ED Arrival to ED Departure for Admitted ED Patients- Psychiatric/Mental Health Patients
eED-2a	Admit Decision Time to ED Departure Time for Admitted Patients-Overall Rate
eED-2b	Admit Decision Time to ED Departure Time for Admitted Patients-Not Psychiatric/Mental Health Patients
eED-2c	Admit Decision Time to ED Departure Time for Admitted Patients-Psychiatric/Mental Health Patients
ePC-1	Elective Delivery
ePC-5/5a	Exclusive Breast Milk Feeding
eSTK-2	Discharged on Antithrombotic Therapy
eSTK-3	Anticoagulation Therapy for Atrial Fibrillation/Flutter
eSTK-4	Thrombolytic Therapy
eSTK-5	Antithrombotic Therapy By End of Hospital Day 2
eSTK-6	Discharged on Statin Medication
eSTK-8	Stroke Education
eSTK-10	Assessed for Rehabilitation
eSCIP-Inf-1	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - Overall Rate
eSCIP-Inf-1-1	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - CABG
eSCIP-Inf-1-2	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - Other Cardiac Surgery
eSCIP-Inf-1-3	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - Hip Arthroplasty
eSCIP-Inf-1-4	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - Knee Arthroplasty
eSCIP-Inf-1-5	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - Colon Surgery
eSCIP-Inf-1-6	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - Abdominal Hysterectomy
eSCIP-Inf-1-7	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - Vaginal Hysterectomy
eSCIP-Inf-1-8	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - Vascular Surgery
eSCIP-Inf-9	Urinary Catheter Removed on Postoperative Day 1 (POD 1) or Postoperative Day 2 (POD 2) with Day of Surgery Being Day Zero
eVTE-1	Venous Thromboembolism Prophylaxis
eVTE-2	Intensive Care Unit Venous Thromboembolism Prophylaxis
eVTE-3	Venous Thromboembolism Patients with Anticoagulation Overlap Therapy
eVTE-4	Venous Thromboembolism Patients Receiving Unfractionated Heparin with Dosages/Platelet Count Monitoring by Protocol or Nomogram
eVTE-5	Venous Thromboembolism Warfarin Therapy Discharge Instructions
eVTE-6	Hospital Acquired Potentially-Preventable Venous Thromboembolism
eEHD-1a	Hearing Screening Prior To Hospital Discharge *

*NEW Added for 2016

2016 Flexible Reporting Options

<p>OPTION 1 → OR → OPTION 2 → OR → OPTION 3</p>																					
<p>Select and Report Data on:</p> <p>Modified Sets of Chart-Abstracted Measures</p> <ul style="list-style-type: none">• Select and report on six of nine sets of chart-abstracted measures for calendar year 2016 applicable to the services provided and patient populations served by the hospital• Perinatal Care will remain required as one of the six sets if applicable, i.e., at least 300 live births per year <table><tr><td>Joint Commission Chart Abstraction Measure Sets</td></tr><tr><td>ED-1a, ED-2a</td></tr><tr><td>PC-01, PC-02, PC-03, PC-04, PC-05</td></tr><tr><td>STK-4</td></tr><tr><td>VTE-5, VTE-6</td></tr><tr><td>IMM-2</td></tr><tr><td>HBIPS-1, HBIPS-2, HBIPS-3, HBIPS-5</td></tr><tr><td>SUB-1, SUB-2, SUB-3</td></tr><tr><td>TOB-1, TOB-2, TOB-3</td></tr><tr><td>OP-1, OP-2, OP-3, OP-4, OP-5, OP-18, OP-20, OP-21, OP-23</td></tr></table>	Joint Commission Chart Abstraction Measure Sets	ED-1a, ED-2a	PC-01, PC-02, PC-03, PC-04, PC-05	STK-4	VTE-5, VTE-6	IMM-2	HBIPS-1, HBIPS-2, HBIPS-3, HBIPS-5	SUB-1, SUB-2, SUB-3	TOB-1, TOB-2, TOB-3	OP-1, OP-2, OP-3, OP-4, OP-5, OP-18, OP-20, OP-21, OP-23	<p>Select and Report Data on:</p> <p>eCQM Sets Only</p> <ul style="list-style-type: none">• Select six of the eight eCQM sets applicable to the services provided and patient populations served by the hospital. Report on either or both 3rd and 4th quarters for calendar year 2016.• Data MUST be reported on AT LEAST ONE eCQM in the eCQM SET(s) selected.• Perinatal Care will remain required as one of the six sets if applicable, i.e., at least 300 live births per year <table><tr><td>Joint Commission eCQM Measure Sets</td></tr><tr><td>eAMI-7a, eAMI-8a</td></tr><tr><td>eCAC-3</td></tr><tr><td>eED-1a, eED-2a</td></tr><tr><td>ePC-01, ePC-05/5a</td></tr><tr><td>eSTK-2, eSTK-3, eSTK-4, eSTK-5, eSTK-6, eSTK-8, eSTK-10</td></tr><tr><td>eSCIP-INF-1, eSCIP-INF-9</td></tr><tr><td>eVTE-1, eVTE-2, eVTE-3, eVTE-4, eVTE-5, eVTE-6</td></tr><tr><td>eEHDI-1a</td></tr></table>	Joint Commission eCQM Measure Sets	eAMI-7a, eAMI-8a	eCAC-3	eED-1a, eED-2a	ePC-01, ePC-05/5a	eSTK-2, eSTK-3, eSTK-4, eSTK-5, eSTK-6, eSTK-8, eSTK-10	eSCIP-INF-1, eSCIP-INF-9	eVTE-1, eVTE-2, eVTE-3, eVTE-4, eVTE-5, eVTE-6	eEHDI-1a	<p>Select and Report Data on:</p> <p>Combination of Chart-Abstracted and eCQM Sets</p> <ul style="list-style-type: none">• Select and report on six sets of measures applicable to the services provided and patient populations served by the hospital• Perinatal Care will remain required as one of the six sets if applicable, i.e., at least 300 live births per year• Measure sets will be selected from among the available complement of core measure sets (See Options 1 chart-abstracted and 2 eCQM Sets)• Hospitals wishing to select this option and that may be interested in reporting on the same set(s) of chart-abstracted and CQMs should contact Frank Zibrat at 630-792-5992 or via e-mail at fzibrat@jointcommission.org• See notes under Option 2
Joint Commission Chart Abstraction Measure Sets																					
ED-1a, ED-2a																					
PC-01, PC-02, PC-03, PC-04, PC-05																					
STK-4																					
VTE-5, VTE-6																					
IMM-2																					
HBIPS-1, HBIPS-2, HBIPS-3, HBIPS-5																					
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eSCIP-INF-1, eSCIP-INF-9																					
eVTE-1, eVTE-2, eVTE-3, eVTE-4, eVTE-5, eVTE-6																					
eEHDI-1a																					

Why Is This Important to EHDI?

Accreditation by The Joint Commission:

- State governments may recognize accreditation in lieu of a hospital licensure inspection conducted by the state licensing agency
- CMS may recognize accreditation in lieu of a Medicare certification survey
 - organizations qualify to receive Medicare and Medicaid reimbursement
- Any accredited hospital may choose the EHDI measure as 1 of their 6 required sets to satisfy their accreditation and certification process

ORYX[®] Initiative

standardized performance measures for accreditation

- Tools to assist organizations in improving their performance, including the EHDI measure:
 - Core Measure Solution Exchange[®] sharing of success stories between accredited healthcare organizations

www.jointcommission.org/core_measure_solution_exchange

- The Exchange is available to accredited and certified organizations on the secure Joint Commission Connect Extranet
- Publicly report chart-based data:
 - Quality Check[®] - search accredited organizations

www.healthcarequalitydata.org

www.jointcommission.org/annualreport.aspx

Use of eCQM Data Including EHDI

- 2016 eCQM measure data will not be publicly reported, used in accreditation related activities, or for recognition programs
- Future usage dependent on a number of factors, including:
 - Data receipt
 - Measure validation
 - Data quality evaluation

Strategize EHDI eCQM Use

State EHDI programs:

- assist hospitals selecting EHDI with their implementation and data collection efforts
- identify Joint Commission ORYX eCQM vendors supporting the EHDI QRDA Category I files
- promote the uptake of EHDI IHE/QRPH Profiles:
 - Newborn Admission Notification Information (NANI)
 - EHDI Hearing Screening Device Message
 - EHDI Hearing Plan of Care (HPoC)
 - EHDI Workflow Document
 - EHDI Quality Measurement (QME-EH)

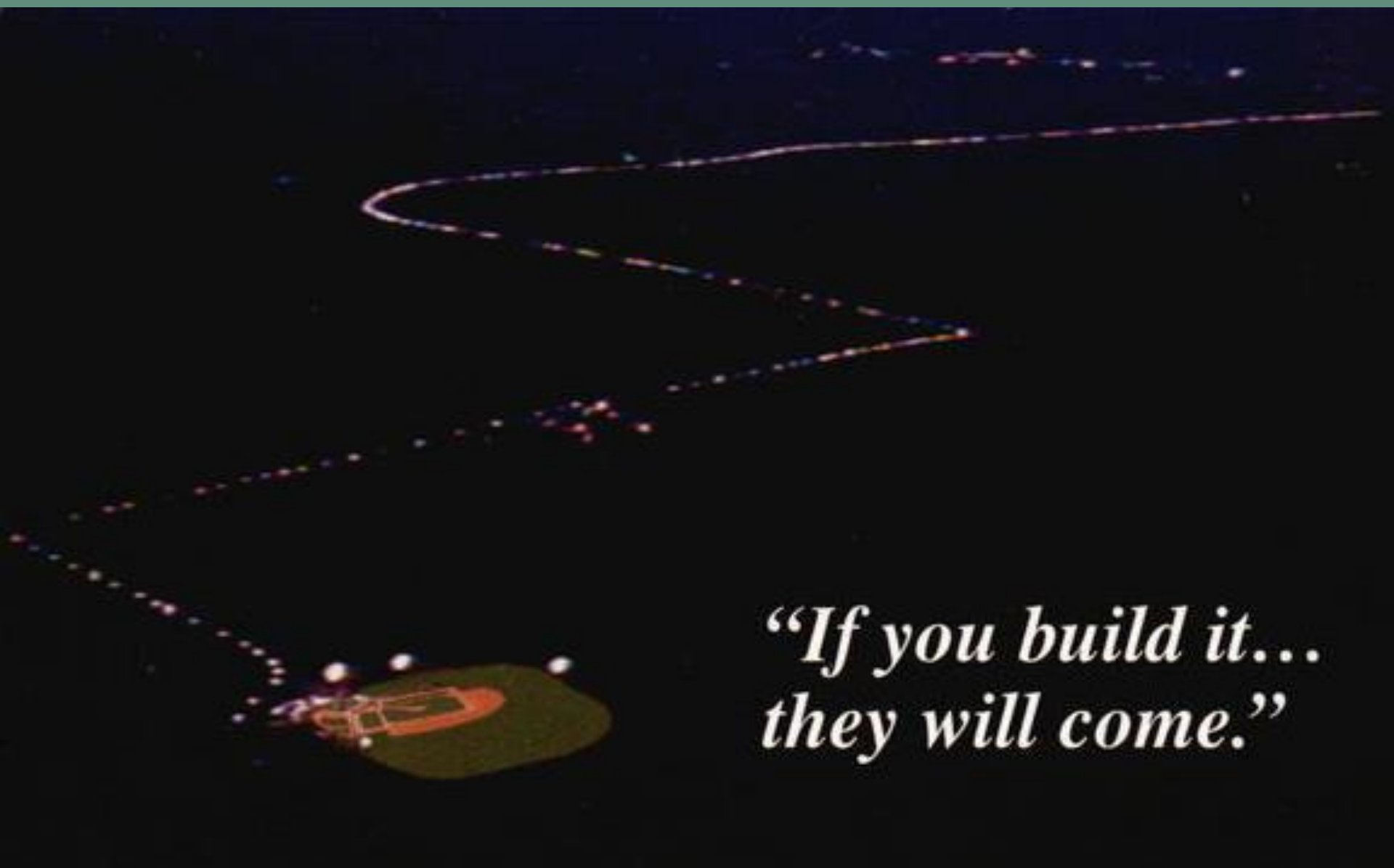
Strategize EHDI eCQM Use

Hospitals:

- must provide written confirmation of the performance measures selected to meet requirements for Joint Commission accreditation

ORYX vendors:

- can report on either or both 3rd and/or 4th quarters for 2016
- report eMeasure data by 3/15/2017



*“If you build it...
they will come.”*

2016 Medicaid/CHIP Child Core Set

Audiological
Evaluation No Later
Than 3 Months of
Age (AUD)*

2016 Core Set of Children's Health Care Quality Measures for Medicaid and CHIP (Child Core Set)

NQF #	Measure Steward	Measure Name
Access to Care		
NA	NCQA	Child and Adolescents' Access to Primary Care Practitioners (CAP)
Preventive Care		
0033	NCQA	Chlamydia Screening in Women (CHL)
0038	NCQA	Childhood Immunization Status (CIS)
1392	NCQA	Well-Child Visits in the First 15 Months of Life (W15)
1407	NCQA	Immunizations for Adolescents (IMA)
1448	OHSU	Developmental Screening in the First Three Years of Life (DEV)
1516	NCQA	Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life (W34)
1959	NCQA	Human Papillomavirus Vaccine for Female Adolescents (HPV)
NA	NCQA	Adolescent Well-Care Visit (AWC)
Maternal and Perinatal Health		
0139	CDC	Pediatric Central Line-Associated Bloodstream Infections – Neonatal Intensive Care Unit and Pediatric Intensive Care Unit (CLABSI)
0471	TJC	PC-02: Cesarean Section (PC02)
1382	CDC	Live Births Weighing Less Than 2,500 Grams (LBW)
1391	NCQA	Frequency of Ongoing Prenatal Care (FPC)
1517	NCQA	Prenatal & Postpartum Care: Timeliness of Prenatal Care (PPC)
1380	CDC	Audiological Evaluation No Later Than 3 Months of Age (AUD)*
NA	AMA-PCPI	Behavioral Health Risk Assessment (for Pregnant Women) (BHRA)
Behavioral Health		
0108	NCQA	Follow-Up Care for Children Prescribed Attention-Deficit/Hyperactivity Disorder (ADHD) Medication (ADD)
0576	NCQA	Follow-Up After Hospitalization for Mental Illness (FUH)
1365	AMA-PCPI	Child and Adolescent Major Depressive Disorder: Suicide Risk Assessment (SRA)
NA	AHRQ-CMS CHIPRA NCINQ	Use of Multiple Concurrent Antipsychotics in Children and Adolescents (APC)*
Care of Acute and Chronic Conditions		
0024	NCQA	Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents – Body Mass Index Assessment for Children/Adolescents (WCC)
1799	NCQA	Medication Management for People with Asthma (MMA)
NA	NCQA	Ambulatory Care – Emergency Department (ED) Visits (AMB)
Oral Health		
2508	DQA (ADA)	Prevention: Dental Sealants for 6–9 Year-Old Children at Elevated Caries Risk (SEAL)
NA	CMS	Percentage of Eligibles Who Received Preventive Dental Services (PDENT)
Experience of Care^a		
NA	NCQA	Consumer Assessment of Healthcare Providers and Systems (CAHPS®) 5.0H (Child Version Including Medicaid and Children with Chronic Conditions Supplemental Items) (CPC)

Recognition:

- Xidong Deng (CDC)
- Marcus Gaffney (CDC)
- Craig Mason (University of Maine)
- Lisa Nelson (Lantana Corporation)
- Patty Craig (Joint Commission)
- Members of IHE QRPH committees
 - Amit Popat, Eric Larson, Gokce Laleci, Lori Fourquet, Lynn Felhofer, Michelle Williamson, Terese Finitzo
- NQF staff and members of the EENT Standing Committee
 - Jacquelyn Youde, Tamala Bradham, Vy Luong

Online Resources:

❑ Centers for Disease Control and Prevention (CDC)

- Early Hearing Detection and Intervention (EHDI)
 - www.cdc.gov/ncbddd/hearingloss/ehdi-hrt.html

❑ Centers for Medicare & Medicaid Services (CMS)

- Meaningful Use EHR Incentive Program
 - www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms
- eCQI Resource Center
 - ecqi.healthit.gov

❑ National Library of Medicine (NLM)

- Newborn Screening Coding and Terminology Guide
 - newbornscreeningcodes.nlm.nih.gov
- Value Set Authority Center (VSAC)
 - vsac.nlm.nih.gov

Online Resources:

- ❑ **Agency for Healthcare Research and Quality (AHRQ)**
 - United States Health Information Knowledgebase (USHIK)
 - ushik.ahrq.gov
- ❑ **Integrating the Healthcare Enterprise (IHE)**
 - Quality, Research and Public Health (QRPH)
 - www.ihe.net/Quality_Research_and_Public_Health
- ❑ **National Quality Forum (NQF)**
 - Quality Positioning System
 - www.qualityforum.org/QPS
- ❑ **The Joint Commission**
 - ORYX Performance Measurement Reporting
 - www.jointcommission.org/performance_measurement.aspx

Thank You!

www.cdc.gov/ncbddd/hearingloss



The opinions and conclusions in this presentation are those of the presenters and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

National Center on Birth Defects and Developmental Disabilities
Division of Human Development and Disability
Child Development and Disability Branch

