Developmental Screening and Electronic Health Records (EHRs)

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Centers for Disease Control and Prevention

The findings and conclusions in the presentation are those of the presenters and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
• About **4 million babies** born in the US each year

• **1 in 4** are at moderate to high risk for developmental delays

• **1 in 6** children will have a developmental disability

• **1 in 68** with autism*

*(NSCH2011/2012; Boyle et al., 2011; CDC, 2014)*

*Autism Spectrum Disorder (ASD)
• National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention (CDC)
  • Role in promotion of child developmental health: EARLY IDENTIFICATION

• Vision: Electronic information as a tool to improve early identification of children with developmental delays, linkage to services, and tracking progress and outcomes.

• Relation to public health “Benchmarks” for early identification: developmental monitoring, screening, linkage to services, and monitoring outcomes.
  • EHRs may help
    • Improve clinical services
    • Improve referrals
    • Provide data for tracking progress and outcomes
The “ONE” in the “1 in 6”
Cycle of Developmental Health

- Developmental Monitoring
- Screening
- Assessment
- Services and Supports
AAP recommends well-child visits for all children should include:

- **Developmental Monitoring**
  - Informal probing about development and behavior at every well-child visit

- **Developmental Screening**
  - Use a validated screening tool at 9, 18, and 24 or 30 months, or when concern
  - ASD-specific screening 18 and 24 or 30 months

- If concern identified
  - Refer for evaluation
  - Refer for intervention

www.aap.org/autism
http://brightfutures.aap.org/
The Issue

- Children who have developmental delays are at greater risk for later emotional and behavioral problems and poor educational achievement.

- Developmental monitoring and screening are an important part of early identification.

- Less than 50% of pediatricians use valid and reliable screening tools.

Steps to Successful Screening Programs

• **Healthcare providers**
  - Monitor development at each well-child visit
  - Use validated screening tools at established intervals, time a concern is raised
    - Use validated screening tool
  - Include developmental screening in EHR
  - “Don’t defer, refer.”

• **Parents**
  - Ask about your child’s development
  - Learn the signs
  - Be persistent, follow-up if concerned

• **Community-wide tools**
  - *Learn the Signs. Act Early.*
  - *Birth to 5: Watch Me Thrive*
Learn the Signs.

Learn the Signs:
- Resources for monitoring key developmental milestones among ALL children
- “Red flags” that can indicate concern

Act Early:
- Discuss Concerns
- Proactive Screening
- Refer for evaluation and services
- Find resources for early intervention and family support

www.cdc.gov/actearly
**Birth to 5: Watch Me Thrive!**

*Birth to 5: Watch Me Thrive!* is a coordinated federal effort to encourage healthy child development, universal developmental and behavioral screening for children, and support for the families and providers who care for them.

1. Celebrate Milestones
2. Promote Universal Screening
3. Identify Possible Delays and Concerns Early
4. Enhance Developmental Supports

[www.acf.hhs.gov/programs/ecd/watch-me-thrive](http://www.acf.hhs.gov/programs/ecd/watch-me-thrive)

NSCH: National Survey of Children’s Health
[www.acf.hhs.gov/programs/ecd/watch-me-thrive](http://www.acf.hhs.gov/programs/ecd/watch-me-thrive)
Federal Partners

- **Department of Health and Human Services (HHS)**
  - Administration for Children and Families (ACF)
  - Administration for Community Living (ACL)
  - Centers for Disease Control and Prevention (CDC)
  - Centers for Medicare and Medicaid Services (CMS)
  - Health Resources and Services Administration (HRSA)
  - National Institute for Child Health and Human Development (NICHD)
  - Substance Abuse and Mental Health Services Administration (SAMHSA)

- **Department of Education**
  - Office of Special Education Programs, Department of Education (OSEP)
The Plan: Part 1  
March 2014

- Coordinated public campaign to promote awareness of child development and developmental and behavioral screening, referral, and follow-up
  - A compendium of valid and reliable screening instruments;
  - Companion guides, designed for providers from multiple sectors as well as the communities in which they live, to assist in selecting screening instruments;
  - A collection of resources to bring awareness to multiple audiences about the importance of child development.
The Plan: Part 2

- Engage public and private partners to validate a developmental and behavioral screening tool for use in the public domain.
  - HHS is funding a study to determine the cultural appropriateness of a public domain tool in American Indian populations.
  - The Departments of Health and Human Services and Education are working to identify other vehicles that can be used to validate public domain tools in various populations.
The Plan: Part 3

- Identify a range of interventions and prevention strategies to support children and families with developmental concerns but who:
  - Are not eligible for Early Intervention;
  - Do not have access to adequate or appropriate services; or
  - Have yet to be evaluated and receive appropriate services.
HL7 Child Health Workgroup Meeting

Developmental Screening and Electronic Health Records (EHRs)

Learn the Signs. Act Early.
Many Facets of EHRs

- Clinical Guidelines
- Quality Measures
- Billing and Reimbursement
- Data Standards
- Clinical Utility and Implementation
- Laws and Policies
- Technology and Vendors
- Public Health Reporting
- Available tools
• Topics
  • Public Health Goals
  • Quality measures
  • Functional profiles
  • Partners
**Healthy People 2020**  
**Maternal, Infant, Child Health**

- **MICH-29**  
  Increase the proportion of young children with an autism spectrum disorder (ASD) and other developmental delays who are screened, evaluated, and enrolled in early intervention services in a timely manner

<table>
<thead>
<tr>
<th>HP2020</th>
<th>Increase the proportion of young children...</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>29.1</td>
<td>...who are screened for an Autism Spectrum Disorder (ASD) and other developmental delays by 24 months of age</td>
<td>NSCH (MMWR on dd monitoring and screening up to age 4)</td>
</tr>
<tr>
<td>29.2</td>
<td>... with an ASD with a first evaluation by 36 months</td>
<td>ADDM</td>
</tr>
<tr>
<td>29.3</td>
<td>... with an ASD enrolled in special services by 48 months</td>
<td>MADDSP (GA)</td>
</tr>
<tr>
<td>29.4</td>
<td>... with a developmental delay with a first evaluation by 36 months</td>
<td>NSCH (starting 2011/2012)</td>
</tr>
<tr>
<td>29.5</td>
<td>... with a developmental delay enrolled in special services by 48 months</td>
<td>NSCH (starting 2011/2012)</td>
</tr>
</tbody>
</table>

Sources of Data on Developmental Screening

- Records
  - Paper
  - Electronic
- Claims
- Survey
  - Parent
  - Provider
- Multiple Sources

Quality Measures for developmental screening: status and use
HEDIS Measures

- Healthcare Effectiveness Data and Information Set
- Measures health plan performance on dimensions of care and service
  - 76 measures
  - 5 domains of care
  - Used by 90% of health plans
  - Allows for an “apples to apples” comparison
HEDIS Measures

• How are HEDIS measures collected?
  • Measures collected through online portal and goes directly to NCQA from health plans.
    • Health Organization Questionnaire for survey data.
    • Interactive Data Submission for non-survey data.
    • Data collection methodology described in HEDIS narrative, but usually based in billing and coding.

• How are HEDIS measures used?
  • Health Insurance Plans Rankings report
  • Quality Compass
  • Reporting to employers who offer health plans.
  • Quality of care/service improvement
“In the last 12 months, did you and anyone in this provider’s office talk about the kinds of behaviors that are normal for your child at this age?”

“In the last 12 months, did you and anyone in this provider’s office talk about how your child’s body is growing?”

“In the last 12 months, did you and anyone in this provider’s office talk about your child’s moods and emotions?”
National Quality Forum (NQF):

• Reminder:
  • Builds consensus on national priorities and goals for performance improvement and works with partners to achieve them.

• Endorses national consensus standards (quality measures) for measuring and publicly reporting on performance

• Often form the basis for integration into clinical practice, e-measures, EHR use (including Meaningful Use)
## NQF and Developmental Screening

<table>
<thead>
<tr>
<th>Measure</th>
<th>NQF #</th>
<th>Steward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developmental screening using a parent completed screening tool (Parent report, Children 0-5)</td>
<td>1385</td>
<td>Maternal and Child Health Bureau, Health Resources &amp; Services Administration</td>
</tr>
<tr>
<td>Developmental Screening by 2 Years of Age (Updated 01/04/13 to include the First Three Years of Life (now similar to 1448))</td>
<td>1399</td>
<td>NCQA</td>
</tr>
<tr>
<td>Developmental Screening in the First Three Years of Life</td>
<td>1448</td>
<td>NCQA and CAHMI</td>
</tr>
<tr>
<td>Promoting Healthy Development Survey (PHDS)</td>
<td>0011</td>
<td>Oregon Health &amp; Science University</td>
</tr>
<tr>
<td>Well-Child Visits in the First 15 Months of Life</td>
<td>1392</td>
<td>National Committee for Quality Assurance</td>
</tr>
<tr>
<td>Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life</td>
<td>1516</td>
<td>National Committee for Quality Assurance</td>
</tr>
</tbody>
</table>
CMS Measures

• CMS 2014 Child Core Set
  • Medicaid and CHIP
  • http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Downloads/ChildCoreMeasures.pdf

• NQF DEV 1448
  Developmental Screening in the First Three Years of Life
Children’s Health Record Format

AHRQ Children’s Health Record Format


• Several requirements related to developmental screening.

  Example:

  • Req-1267

  **Title** Support validated developmental screening tools

  **Description** The system SHALL support the use and documentation of formal, validated best practice screening tools such as: ASQ, PEDS, M-CHAT, PSC, etc.
DC.2.5.1 Present Alerts for Preventive Services and Wellness

Statement: At the point of clinical decision making, identify patient specific suggestions/reminders, screening tests/exams, and other preventive services in support of routine preventive and wellness patient care standards.

Description: At the time of an encounter, the provider or patient is presented with due or overdue activities based on protocols for preventive care and wellness. Examples include but are not limited to, routine immunizations, adult and well child care, age and gender appropriate screening exams, such as PAP smears.
HL7 IT Interoperability Standard
Developmental Screening in the First 3 Years of Life
Next?

• Small Resources, Good Partners...
Possible Partners

- HL7
- Integrating Healthcare Enterprise (IHE)
  - http://ihe.net/

- Federal
  - CDC, HRSA, AHRQ, CMS, ACF, ED

- AAP
  - Council on Clinical Information Technology
  - http://www2.aap.org/informatics/important-links.html
  - Council on Developmental and Behavioral Screening
  - Bright Futures (preventive health services in ACA)

- National Academy for State Health Policy
  http://www.nashp.org/providers-and-services/developmental-screening
  - Assuring Better Child Development – ABCD
  http://www.nashp.org/abcd-welcome
  - Oregon dev screening standards project
  http://www.innovations.ahrq.gov/content.aspx?id=3952

- Healthcare providers
- Vendors
- Others
Thank you!

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www.cdc.gov/actearly
www.cdc.gov/autism
How NQF-Endorsed Measures Get Implemented in Clinical Practice...

- Do the NQF Measures match objectives that align with interest in early identification?
- If no, do we want to propose another measure to be reviewed and endorsed by NQF?
  - 3 year schedule for endorsement with 22 priority areas
- If yes, what is happening with the use of the NQF measure in clinical practice?
  - Has the case been made and integration started?
    - Vendors who have adopted to integrate into EHR packages
    - Clinical entities using the measure in practice (Kaiser, CHOA, etc.)
    - Programs (AAP Bright Futures, ABCD, CAHMI)
  - Does a case need to be made for integration into clinical use?
  - How is the use monitored?
### NQF #1385 Developmental screening using a parent completed screening tool (Parent report, children 0-5)

<table>
<thead>
<tr>
<th>Description</th>
<th>Population</th>
<th>Data Source/Type of Measure</th>
<th>LTSAE Objectives (Monitoring, Screening, Access to Services)</th>
<th>Can this help us monitor systems changes or LTSAE-specific?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developmental screening using a parented completed screening tool (Parent report, children 0-5).  Assesses whether the parent or caregiver completed a developmental screening tool meant to identify children at risk for developmental, behavioral or social delays.</td>
<td>National, regional, state</td>
<td>National Survey on Children’s Health (NSCH) - Patient Reported/Survey Process measure</td>
<td>Monitoring, Screening (basis for MMWR on NSCH Screening pre-ACA; reported ages to align with HP2020)</td>
<td>Possible connection to system level changes. Cannot attribute directly to LTSAE without specific survey questions re: LTSAE</td>
</tr>
</tbody>
</table>
## NQF #1399: Developmental Screening in the First Three Years of Life

<table>
<thead>
<tr>
<th>Description</th>
<th>Population</th>
<th>Data Source/ Type of measure</th>
<th>How is it Used?</th>
<th>LTSAE Objectives (Monitoring, Screening, Access to Services)</th>
<th>Can this help us monitor systems changes or LTSAE-specific?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developmental screening in the first 3 years of life. Children who had documentation in their medical record who had developmental screening performed by 1(^{st}), 2(^{nd}) and 3(^{rd}) birthdays.</td>
<td>National, regional or individual clinical level</td>
<td>Clinical Data/ Claims data Process measure</td>
<td>Corresponds with HP2020 MICH 29.1, but no national measure</td>
<td>Screening</td>
<td>Systems</td>
</tr>
</tbody>
</table>
## NQF #1448 Developmental Screening in the First Three Years of Life

<table>
<thead>
<tr>
<th>Description</th>
<th>Population</th>
<th>Data Source/Type of Measure</th>
<th>LTSAE Objectives (Monitoring, Screening, Access to Services)</th>
<th>Can this help us monitor systems changes or LTSAE-specific?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developmental screening in the First Three Years of Life. Percentage of children screened for the risk of developmental, behavioral and social delays using a standardized screening tool in the first 3 years of life. Since updated in Jan 2013, similar to 1399. Guess that 1399 replacing 1448.</td>
<td>Regional, state, individual systems</td>
<td>Overlaps with HP2020 MICH 29.1, but no national measure Claims data. Only coded as developmental screening*Does not account for modified or additional screens such as ASQ-SE or autism screening</td>
<td>Screening/Monitoring, but will miss children who might be coded only for additional screens</td>
<td>Systems change</td>
</tr>
</tbody>
</table>

*Does not account for modified or additional screens such as ASQ-SE or autism screening.
## NQF #0011 Promoting Healthy Development Survey

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<thead>
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<th>Description</th>
<th>Population</th>
<th>Data Source/ Type of Measure</th>
<th>LTSAE Objectives (Monitoring, Screening, Access to Services)</th>
<th>Can this help us monitor systems changes or LTSAE-specific?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promoting Healthy Development Survey (PHDS)</td>
<td>Clinician or individual practice, but can be implemented at regional or national levels</td>
<td>Patient reported data-Survey</td>
<td>Access to developmental screening/monitoring. Access to services questionable.</td>
<td>Could be implemented in the context of a demonstration project or other process to determine LTSAE specific change or monitoring system change.</td>
</tr>
</tbody>
</table>