INNOVATIVE APPROACHES TO IMPROVE DEVELOPMENTAL SCREENING: HIGHLIGHTS FROM THREE ACT EARLY TEAMS

Learn the Signs. Act Early.
Quarterly Webinar Series

March 1, 2012
Webinar Overview

• Introductions

• Presentations

  * Elaine Gabovitch, MPA, Massachusetts Act Early Ambassador and Team Leader
    University of Massachusetts Medical School, E.K. Shriver Center, Waltham, MA
  * Roula Choueiri, MD, Neurodevelopmental Pediatrician
    Center for Children with Special Needs, Tufts Floating Hospital, Boston, MA
  * Jane Charles, MD, Developmental Pediatrician
    Medical University of South Carolina, Charleston, SC
  * Fauzia Malik, MPAS, MS, Program Manager, Developmental Screening Initiative
    University of New Mexico, Center for Development and Disability, Albuquerque, NM

• Q & A

  • Submit any questions throughout the webinar via the ‘questions’ box on your webinar dashboard. Moderators will read the questions following the presentations.

  * Please take a few minutes to complete our short survey!
MA Act Early Program

State Goals

Elaine Gabovitch, State Team Leader
Three task forces & 1 project...

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<th>Task Forces</th>
<th>Project</th>
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<td>• <strong>Goal 1</strong>: Develop an affordable &amp; feasible outreach &amp; public awareness plan</td>
<td>• Culturally competent autism screening kit for dissemination to community health centers and pediatric offices</td>
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<td>• <strong>Goal 2</strong>: Train professionals on early identification in health care, early childhood &amp; education</td>
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<td>• <strong>Goal 3</strong>: Shorten the wait times between screening &amp; diagnosis and diagnosis &amp; intervention</td>
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Included in the kit:

- Clinician tips guide
- Referral Information at a Glance
- Pediatric Developmental Screening Flowchart
- Fact sheets
- Track Your Child’s Developmental Milestones brochures
- Modified Checklist for Autism in Toddlers (M-CHAT) *
  - instructions
  - a scoring guide
- M-CHAT screening tool (in English, and Chinese, Haitian-Creole, Spanish & Vietnamese)
- M-CHAT Follow-up Interview
MA Act Early Program

Early Identification Task Force

Roula Choueiri, MD, Task Force Co-Coordinator
Main project:

• Creating a Coordinated Pilot model for Early Screening and Early Diagnosis

• Shortening the wait time but also:
  
  – Providing screening education for pediatricians, feedback in a timely manner that can reinforce their screening habits
  
  – Creating improved communication between Pediatricians, Early Intervention and Developmental Behavioral Pediatricians (or diagnosticians)
M-CHAT: 18-36m
Modified Checklist for Autism in Toddlers
(Robins, Fein, & Barton, 1999)

- 23 questions
- Child fails if 2 critical items are failed OR any 3 items are failed
- RISK/Needs further evaluation
- Time: 5-10mn
- Sensitivity/Specificity: 85/93
- Free at: www.mchatscreen.com
- Translated in several languages.

- Should follow-up with a structured interview to decrease false positives.
- Positive Predictive Value (PPV):
  - 36% for the initial screening
  - 74% for the screening plus follow-up telephone interview
- The M-CHAT Follow-Up Interview can be downloaded free of charge from http://www2.gsu.edu/~psydldr
Early Screening and Identification

• Very few pediatricians aware about the follow up interview. TIME.

• When a child fails an MCHAT: referred to EI.

• Team up with EI so interview administered part of initial intake.

• Chose the Lowell/North Chelmsford area as accessible to developmental pediatric satellite clinic (CCSN), but also culturally and socio-economically diverse population
Partner with DBP/diagnostician to:
- Connect with clinics
- Educate about screening tools
- Investigate what screening is being done already and if secondary screening person available
- Provide CDC Act Early material, websites; resources

Pediatric Clinics in the Lowell Area
SCREENING FOR ASD

+screens referred to secondary screening point

EI appointed person to perform f/up MCHAT interview in person-

Screens – for ASD concerns: EI hook up for services

Screens + for ASD referred to DBP/Diagnostic Clinics
Ex:
- CCSN in Chelmsford (2 DBP to then have 1-2 slots/month open for referral from this route)
Early Screening and Identification

Initial Pilot Over Four Months: February-End June 2011

- Started small to build a system and think about issues

- Identified:
  1. a general pediatrics practice willing to test the model (Drumhill Pediatrics in North Chelmsford),
  2. an Early Intervention Program (Thom Ann Sullivan EI program) and
  3. the developmental pediatrician in satellite clinic in North Chelmsford (CCSN).

- Drumhill Pediatrics
  - 3 general pediatricians
  - Around 100 children between 15m-36m seen per month
  - Already do M-CHAT at 18, 24 months
  - Agreed to do it at 18, 24, 30, 36m
Early Screening and Identification

Workshops and M-CHAT follow up interview training at EI, and EI consortium meetings.

Qualitative feedback questionnaires for: parents, pediatricians, EI to evaluate the pilot model.
Initial Results

- **February-June 2011**: 5 referrals due to failed M-CHAT to EI

- Of those 1 referral to DBP after EI intake and interview (ASD+)

- Different reasons for other 4 (different EI program; parents wanting to wait; screened out)

- **All received EI**

- Two referred back to DBP in November 2011 and not ASD.

- **In June 2011, Drumhill Pediatrics favored to continue pilot model.**

- MCHAT administered at 18m, 24m and 36 months. Difficulties to have insurance cover the 30m MCHAT.

- **June-December 2011**: 2 referrals failed MCHAT and the 2 referred to DBP. Both ASD+
Referral Results

• After initial enthusiasm, some slowing in referrals over summer that picked up in fall 2011

• Generalizability of this model?

• Larger community Health Center in Lowell area

• Conducted informative lunch session about early signs of ASD, screening, CDC material and talked about the pilot.
Lowell Community Health Center Pilot

• Center overview
  – Large, busy practice
  – 6 pediatricians; 3 NP
  – Lower SES; culturally diverse; medically underserved

• Prior to pilot
  – No coherent screening policy for ASDs
  – PEDS for general screening

• Educational Kick-off
  – We conducted training on the pilot algorithm end of June
  – MCHAT implemented for 18 and 24 months.

• Pilot results: mid-July to mid-December, 2011
  – For failed M-CHAT
    • < age 3: 4 referrals to EI
    • (3 screened out or refused EI; 1 referred to DBP= Autism)

• Overall EI referral rate
  • 26-28 total referrals/month
  • Most not being sent initially with M-CHAT score provided; explains small numbers.
  • Add screening at 30 months.
Participant Feedback

- **LCHC (5 respondents)**
  - Parents like the M-CHAT because it is more specific questions
  - Pediatricians / center staff report no challenges with implementation
    - fits into clinic flow
  - Scoring difficult at times- Created transparency for it.
  - Some issues with translated M-CHAT coming up.
  - Improves communication with EI, DBP. *Want to include MCHAT at 30 months instead of PEDS.*

- **Drumhill (3 respondents)**
  - Agree that M-CHAT has improved practice, evaluation and EI referral speed and that they receive specialist feedback quickly.

- **Early Intervention (3 respondents)**
  - Agree M-CHAT fits into clinical practice without burden
  - M-CHAT increases speed to full evaluation
  - “I wish all children suspected of ASD could be evaluated as quickly as those in the study”
Current Issues

- **Need better coordination for data tracking**
  - How can we better track who is being screened, referred, flagged, seen: working on tables and regular conference calls.
  - How can we help LCHC and Drumhill Pediatrics structure this so that it is sustainable beyond pilot?

- **Better feedback from families, pediatricians and EI**
  - Feedback questionnaires not yet administered routinely to parents: overwhelming; consider shortening

- **Open Slots for diagnostic evaluations**
  - Open slots can be an issue: started it, then stopped and now restarting this as more referrals coming in

- **Identifying other diagnosticians willing to participate in the pilot**
  - Creating list of diagnosticians in the area willing to evaluate young kids within 2 months.
Next Steps

Solicit additional pilot feedback
  • Get parent & physician feedback, particularly on the LCHC pilot

Continue pilots
  • Continue pilots with goals of determining feasibility, and how to generalize
  • Determine methods to collect more comprehensive data on screening and referral activities

Identify other diagnosticians
  • While working to understand broader trends in MA
  • Compiling a list

Regular contact
  • Monthly conference calls as task force but also with LCHC and to start with Drumhill Pediatrics and EI.

Feedback questionnaires
Early Screening & Identification Task Force

• **Members:**
  – Co-Coordinators:
    • Roula Choueiri
    • Theresa Tribble
  – Bernadette Bentley
  – Patti Davis
  – Zhandra Ferreira-Cesar Suarez
  – Lynn Hironaka
  – Margaret Mahoney
  – Meg Manning
  – Tracy Osbahr
STAT-MD TRAINING
EARLY ID OF ASDs FOR PEDIATRIC PROVIDERS

JANE M. CHARLES, MD

DEPARTMENT OF PEDIATRICS
DIVISION OF
DEVELOPMENTAL/BEHAVIORAL
PEDIATRICS
MEDICAL UNIVERSITY OF SOUTH CAROLINA
BACKGROUND CONCERNS

- Early intensive behavioral services = better prognosis. However, nationally, wait lists for dx evals are long.

- Diagnosis happens just before or after Part C services have ended, thus missing out on intensive therapy.
South Carolina ADDM: current age of first concern is less than 3 years old, BUT average age dx is 4 years 6 months (ADDM 2009)
Importance of Effective Early ID of ASD

- CDC determines ASD as a health issue of “critical importance”. (CDC 2009)

- Early ID provides more intervention opportunities.

- More intervention = can optimize long term outcome, reduce lifetime cost of services, improve functional independence
American Academy of Pediatrics
Recommendations

• Autism Toolkit 2007
  ○ Algorithms for ASD and gen’l developmental screening
  ○ Surveillance and screening tools for different age groups
  ○ Fact sheets for MDs re: management of specific issues-sleep, GI, behaviors, eating/nutrition.
  ○ Family information handouts

• MCHAT: Screen at 18 and 24 mo.
  ○ More frequent in high risk kids or delayed
  ○ Screen x 2 to catch regression
  ○ Free off Internet
  ○ Positive screens followed by immediate referral for an evaluation and then, initiation of intensive services
However…..

- **Long waits** for gold standard multi-disciplinary evaluations: 6-12 months

- **Delay** in initiating intensive therapies

- **IDEALLY**: + screen → rapid initiation of intensive services regardless of diagnostic status.
- Then: later confirm with gold std evaluation.
GOLD STANDARD DX EVALUATION

- Autism Dx Observation Schedule + Autism Dx Interview-Revised (comprehensive interview tool)
- Developmental Assessment-Lang/cognitive/ADLs
- Medical Eval- Hx, physical, growth, dysmorphology exam, vision, hearing.
- Further studies if hx suggests: EEG, MRI, etc.
WILL DX STICK?

- Can ASDs be accurately dx’d in first years of life
When is Diagnosis possible?

- Landa and Mayer (2006)
  No statistically significant group differences detected at 6 months
By 14 months the ASD group significantly worse on all scales (Mullen scales)
Conclusion
  Unusual slowing occurred between 14-24 months
When is Diagnosis possible

- Zwaigenbaum et al (2009)
- To date, prospective studies have shown that by 12 to 18 months of age, infants later diagnosed with ASDs are distinguished from other infants at high risk
When is Diagnosis possible?

- Ozonoff et al (2010)
- .....Group differences were significant by 12 months of age on most variables
Create a framework for performing ASD diagnostic evaluation within community-based practices that can:

- **Reduce waits** between screening concerns and diagnostic/service delivery
- **Meet time demands**
- **Accurately identify** both kids with and without ASDs
- **Link children** with appropriate early intervention services.
- **Be adequately reimbursed!**
TENNESSEE AAP: ‘START-ED’

- Vanderbilt University+Tenn AAP:
  - Wendy Stone, PhD and Zach Warren, PhD.
  - Vanderbilt Kennedy Center Treatment and Research Institute for Autism Spectrum Disorders

- Trained groups of interested ped providers to become regional STAT consultants to screen M-CHAT positive kids.

- Part C program agreed to accept results of second level screener to start early intensive services while waiting for confirmatory “gold standard” dx eval.
SCREENING TOOL FOR AUTISM IN TODDLERS

- For referral populations
- 12 item play-based tool to assess key social and communicative behaviors: Play, communication, joint attention, motor imitation
- 20 min to administer
- 24-36 mo (can use from 18-36+)
- Sensitivity: 0.92
- Specificity: 0.85
South Carolina STAT MD Training

- **Regional Act Early Summit Meeting**, Nashville, TN 2008. USC UCEDD + key stakeholders, agencies, service providers, parents

- **Act Early State Plan**: two projects
  1. Road Map
  2. STAT-MD

  Funded by grant from Association of Maternal and Child Health (AMCHP). “Act Early State Systems Grant”
STAT-MD Training

- 1 ½ days intensive training
  - Core features of ASD
  - STAT training
  - Diagnostic interviewing and templates
  - Discussing results with parents
  - Billing and Coding
  - Service recommendations, referrals, managing co-morbidities
  - +CME
  - Pediatricians, Family Med, Nurse Practitioner, nurse manager of large practice, State agency consultants, MUSC devel peds faculty
1. Medical assessment
   - r/o sensory deficits
   - Neurodevelopmental hx
   - Physical exam

2. Semi-structured social interaction
   - STAT
   - Observations in waiting room and free play
   - Structured clinical interview
     - Specific developmental hx probes
CODING

- Details in AAP Toolkit
- **96110- Screening**
  - M-CHAT at 18 and 24 mo
  - Pays for clinical staff time, supplies, insurance liability

- **96111-Developmental Testing**
  - STAT
  - Includes assessment of motor, language, social adaptive &/or cognitive functioning by standard developmental tools.
  - MD or “other trained professional” can administer.
  - RVUs for MDs
Follow up

- Validation with DVD cases, mailed to Vanderbilt for scoring
- Pre and post questionnaire to measure practice change
  - Comfort level discussing ASDs with families
  - Routine use of screening tools
  - Barriers to use of screening tools
  - # STAT assessments done
Pilot Project

- Validation of STAT positive and negative kids with ADOS
- Change in number of Part C referrals in regions with STAT consultant
- Developmental tracking
- Family satisfaction/stress
- Measures of practice change
Potential Impact on Community

Number live births in SC, $1/110$ with ASD =

- $60,682$ live births (2009) per year in South Carolina
- divided by $1/110 = 552$ children per year with ASD in SC

Impact of 20 trained providers in state
- $1$ eval /week = $1000$ consultations per year far exceeding the estimated prevalence rate for ASD in SC
  - Pop level impact—expedited entry into baby net/ decreased wait for kids
  - long-term public health impact?
Envision New Mexico puts the tools for quality improvement and evidence-based practice into the hands of primary care and behavioral health providers throughout New Mexico.
Strategies to Promote Developmental Screening for Young Children in New Mexico

Fauzia Malik, MPAS, MS
DSI Program Manager, NM Act Early Ambassador
Developmental Screening Initiative (DSI)
University of New Mexico HSC
National Rates of Screening

[Map showing developmental screening rates across the United States with varying shades indicating performance levels.]
Developmental Screening Initiative

Mission:
To ensure that no child reaches kindergarten with an undetected developmental condition
About DSI

- DSI is a collaboration between Envision NM and the Center for Development and Disability

Funding by:
- NM DOH/FIT
- NM Human Services Department/Medicaid

Participants:
- Primary care practices
- Early childhood agencies
About DSI

- Approved as a Quality Improvement project by the American Board of Pediatrics and American Board of Family Medicine
  - Eligible to earn Part IV Maintenance of Certification (MOC)
- UNM Institutional Review Board (IRB) Approval
  - IRB Exception Status
- Navajo Nations HRRB Application Approval
Project Protocol

- 9-12 month intervention cycle
- Regional training approach in larger communities
- Individualized training in smaller communities
- Pre- and Post-training surveys
Project Protocol

- **Initial training**
  - Presentations regarding Developmental Screening, AAP guidelines, Quality Improvement, coding & billing

- **Medical Record Review**
  - Baseline chart reviews (random sample of charts 3-6 months prior to training)
  - Site visit
  - 5 follow-up chart reviews to assess improvement

- **Learning Collaboratives** (mid-cycle)
- **Monthly Webinars**
- **Consultation via teleconferencing, phone, and email**
Implementation Strategies

- **Strategy #1**: Knowledge of AAP guidelines

- **Strategy #2**: Use of Institute for Healthcare Improvement (IHI) Model for Improvement
  - Plan, Do, Study, Act (PDSA)
    - **Plan** improvement changes
    - **Do** what is planned
    - **Study** the results and identify modifications
    - **Act** upon the indicated modifications
Implementation Strategies

- **Strategy #3: Practice-wide intervention**
  - Systemic change that is practice-wide
  - Identify a practice champion
  - Introduce idea to all staff
  - Mapping the change
Implementation Strategies

- **Strategy #4: Choose a screening tool**
  - Broad general development vs. specific areas of development
  - Choose a tool with sensitivity and specificity of 70-80%
  - Provide ASQ-3 toolkit free-of-cost
Strategy #5: Learning Collaboratives

- Increase awareness of resources in local community
- Multi-agency sessions
  - How to use existing resources more effectively
  - Reduce barriers to care
  - Information sharing to uncover gaps in services
  - Collaborative efforts to address gaps (e.g. coalitions to change policies and programs)
Average Screening Rates for Seven Pediatric Practices, 2009-2010

- Any Tool
- Validated Tool
Envision New Mexico puts the best resources available into the hands of the doctors, nurses and community workers keeping New Mexico families healthy.

For Questions:
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Thank you
Question & Answer

To ask a question:

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THANK YOU

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  www.cdc.gov/actearly

* AUCD’s Act Early Webpage  www.aucd.org/actearly

Questions about the Webinar series?

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