A Clinical Process Support System: What is it, does it work?

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Disclosure

• Dr.s Sturner and Howard have a conflict of interest as co-founders of CHADIS.
• This presentation will focus on prior academic presentations and publications
A Clinical Process Support System

Pre-Visit
- Patient Generated Data Collection

Within Visit:
- Moment of care decision support for clinicians
- Motivational Interview
- Shared Decision Making

Post-Visit:
- For Patients
  - Patient Education
  - Between Visit Monitoring
- For Clinicians
  - QI feedback with MOC-4 credits
  - System of Care

Benefits of Patient Reported Outcomes (PRO)

For Patients
- Reduced ED use
- Improved quality of life
- Longer survival (e.g., advanced cancers)
- More accurate data
- Better patient–clinician communication
- More shared decision making
- Improved satisfaction
Outcomes with PRO vs. Treatment as Usual

- Doctors “..let me be a doctor again”
  - Improved satisfaction
  - Reduced burden, time
  - Increased income

- Barrier to Introduction of PRO:
  “EHR vendors have only rudimentary ability to collect PRO data - ..would be eased by availability of standardized PRO platforms that could accompany or easily be plugged into the EHR.”

Benefits of Patient Reported Outcomes for Doctors
New England Journal of Medicine: Rosenstein, 2017
Online Support for Autism Detection & Care

- Pre-visit screening by parent report
- Decision support for clinicians to do the M-CHAT Follow Up
- Machine Learning to adapt screening per patient for higher accuracy
- Assistance with referral and tracking for a System of Care

Autism Screening - Background

- Autism Spectrum Disorder (ASD) is impairing and prevalent disorder – 1 in 59 (Baio et al., 2018).
- Early evidence-based intervention for children with ASD is associated with improved long-term outcomes (National Research Council 2001; Howlin et al. 2009)
- Screening all children at 18 and 24 mo visits recommended by AAP and CDC.
- USPSTF (2015) – data limitations in currently recommended tools;
  - lack of validation data in community samples including screen failures
  - Lack of data in the youngest
M-CHAT

The M-CHAT-R is the most commonly used autism specific screen
• 2-stage screen with structured follow-up interview
  • Sensitivity – 0.85; Specificity – 0.99; PPV: 0.48 - 94.5% of false positives turn out to have some developmental problem (Robins, 2014)
• Follow-up “telephone interview” reduces over-referrals by 87% (Chebowski, et. al., 2013)
  • Was “highly recommended” now “required” except if >7 score
  • Lowers EI burden
  • Avoids Family Stress
  • 26 page algorithm
  • Validation was from RA phone interview some months later
• Can the M-CHAT be completed reliably in primary care pediatric practice?
  • Low use of in pediatrics (Swanson, et. al., 2013)
  • Will online clinical process support help a PCP reliably complete the required structured interview within the visit?

Study 1 - Recruitment

10,922 screened with M-CHAT (18 or 24 mo. primary care pediatric visits)

Completed dx evaluation: 98 (both M-CHAT + M-CHAT/F +)
Can doctors do F/U as well as Trained Ras with Decision Support?

*Comparing Accuracy Rates using M-CHAT/F:

- Pediatrician  \( (N = 98) \) 0.67 (0.57–0.76)
- Autism Center  \( (N = 97) \) 0.63 (0.53–0.73)

- Comparisons (2-tailed z test and TOST) = equivalence

M-CHAT F/U Specific Questions: Did you mean it?

9. In a questionnaire you reported that your child does not show you things by bringing them to you or holding them up for you to see. Not just to get help, but to share. Is that correct about your child?

- Yes
- No

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M-CHAT F/U: Specific Example

Does your child sometimes bring you...
- A picture or toy just to show you? (pass response)
- A drawing he/she has done? (pass response)
- A flower he/she has picked? (pass response)
- A bug he/she has found in the grass? (pass response)
- A few blocks he/she has put together? (pass response)
- Other appropriate response (describe) (pass response)
- No appropriate response (fail response)

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M-CHAT F/U: Confirming Language

<table>
<thead>
<tr>
<th>Results: Comparisons*</th>
</tr>
</thead>
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<table>
<thead>
<tr>
<th>AGE (mos)</th>
<th>MCHAT</th>
<th>MCHAT/F</th>
<th>CART (M-CHAT+MCDI+ASQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 20</td>
<td>0.48</td>
<td>0.31</td>
<td>0.69</td>
</tr>
<tr>
<td>&lt; 20</td>
<td>0.36</td>
<td>0.72</td>
<td>0.88</td>
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© 2009: Robins, Fein, & Barton
M-CHAT: Age Issues

<table>
<thead>
<tr>
<th></th>
<th>High Risk Older (N = 96)</th>
<th>High Risk Younger (N = 107)</th>
<th>Low Risk Older (N = 31)</th>
<th>Low Risk Younger (N = 36)</th>
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<tbody>
<tr>
<td>PPV ASD</td>
<td>0.74</td>
<td>0.78</td>
<td>0.61</td>
<td>0.28</td>
</tr>
</tbody>
</table>

Challenges for Autism Screening at 18 month.

- Many parents report their concerns by 12- to 19-mos
- 18 mo M-CHAT pos.screen -> only 1/3 of ASD dx identified at 9 yrs in Norwegian cohort study (Stenberg, et al., 2014)
- But -- 32% of ASD at 24 mo. represent regression – not apparent at 18 mo. (Barger, 2013)
- ASD symptoms emerge gradually in toddlers (Ozonoff, et al., 2008) but M-CHAT items are yes/no
- Addition of standard language measure (MCDI) may improve accuracy (Veness, 2012)
- More M-CHAT item failures at 18 than 24 mo. esp. newly emerging items (Sturner, et al., 2017)
- Meta analysis (Yuan, et al., 2018) – accuracy at 18 mo “cannot be precisely predicted ..few studies with community samples at 18 mo”.
Study -18 months

Screened with M-CHAT/Q-CHAT (18 mo. only visit): 11,878

Administer Items from prospective studies + POSI + language items (MCDI): 410 (96 + screen)(314 - screen)

Completed Diagnostic Evaluation: 410

<table>
<thead>
<tr>
<th>Predicting Autism Diagnoses at 18 mo. (N = 410)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
</tr>
<tr>
<td>M-CHAT-R</td>
</tr>
<tr>
<td>M-CHAT-R/F</td>
</tr>
<tr>
<td>D/QCHAT+D/POSI &gt;= 28</td>
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</table>
### Predicting Autism Diagnoses at 18 mo. (N = 410)

<table>
<thead>
<tr>
<th>Test</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>PPV</th>
<th>NPV</th>
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<tbody>
<tr>
<td>M-CHAT-R</td>
<td>0.73</td>
<td>0.66</td>
<td>0.28</td>
<td>0.93</td>
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<tr>
<td>M-CHAT-R/F</td>
<td>0.32</td>
<td>0.90</td>
<td>0.36</td>
<td>0.88</td>
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<tr>
<td>D/QCHAT+D/POSI &gt;= 28</td>
<td>0.65</td>
<td>0.81</td>
<td>0.38</td>
<td>0.93</td>
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<tr>
<td>CHADIS Machine Learning</td>
<td>0.94</td>
<td>0.89</td>
<td>0.58</td>
<td>0.99</td>
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</table>

### Autism Screening Predicting Combined Autism and Developmental Disorder Testing (N = 410)

<table>
<thead>
<tr>
<th>Screen</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>PPV</th>
<th>NPV</th>
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<tr>
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<td>0.62</td>
<td>0.71</td>
<td>0.56</td>
<td>0.76</td>
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<tr>
<td>M-CHAT-R/F</td>
<td>0.27</td>
<td>0.93</td>
<td>0.70</td>
<td>0.68</td>
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<td>ASQ</td>
<td>0.40</td>
<td>0.85</td>
<td>0.57</td>
<td>0.73</td>
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<tr>
<td>MCHAT-R+ASQ</td>
<td>0.75</td>
<td>0.63</td>
<td>0.55</td>
<td>0.80</td>
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<tr>
<td>CHADIS M.L.</td>
<td>0.94</td>
<td>0.81</td>
<td>0.67</td>
<td>0.98</td>
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New Paradigm for Screening

- KISS ("keep it simple stupid") principle: scoring needs to be simple, add up, same for all ages

- DIS (Digital Is Simple) principle: scoring done by computer is simple for the clinician even if really complex

Practices are Maintaining and Increasing Performance using MOC QI

Use of Developmental Screening Tools by MOC Enrolled Physicians

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<td>December</td>
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Care Coordination Tools

• Refer the pediatric patient and family members to medical providers or community agencies — receiving providers have approval to **reach out to the patients**

• Send and receive referrals by email or fax

• Document parent/guardian consent for referral (verbal or written online)

• Share CHADIS reports, comments, status-of-service updates

• Automatic notifications regarding ongoing referrals for tracking

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**Early Childhood System of Care Model**

- **Parent completes recommended screening tools before routine care visit**
  - PCP views new results in CHADIS and can communicate with parents or specialists accordingly
  - Results from specialist evaluation & coaching documented in CHADIS

- **PCP refers child to specialist via care-coordination function in CHADIS**
  - Specialist views referral information in CHADIS and follows up with family

- **PCP views results of screening tools in CHADIS and discusses with parent**
  - PCP views new results in CHADIS and can communicate with parents or specialists accordingly
How Does a Computer Help Patient Centered Care?

Patient Centered Care

• Patient Centered Care: IOM (National Academy of Medicine) definition*
  “care that is respectful of and responsive to individual patient preferences, needs, and values” and that ensures “that patient values guide all clinical decisions.”

• Data on patient satisfaction and improved outcomes:
  • Less diagnostic testing e.g., Cochrane Review
  • Pre-visit patient data collection is a key facilitator

Shared Decision Making

e.g. Sharing Visual Results
e.g. Problem Solving Counseling
e.g. Motivational Interviewing

Using Shared Decision Making for ADHD Care

• Families often distrustful of pharma bias
• Families have heard or read ill on internet
• Deciding together increases:
  • Adherence
  • Long term use of medication
  • Transition to self care in adolescence
  • Avoiding divergence of medication

• Components: Careful history, placebo trial, goal setting, 504 request, repeated measures, educational materials.
• More time for discussion using pre-visit info
Multisite Multimodal Treatment Study for ADHD Care

- 600 children (age 7 – 9 yrs)
- ADHD combined type
- 24 month outcomes
- Groups
  - Medical management: monthly tailored; Ritalin
  - Behavioral Therapy: 8 week summer; training; in-class aid, teacher consultation
  - Combined Medical Mgt and Behavioral Therapy
  - Community Care: 67% meds mostly prescribed twice a day

MTA Study: % “Normalized” at 14 months

MedMgt = Tertiary care medication mgt with dose adjustments based on school feedback

CC = Medication mgt by Community Physicians

% = % of children below ADHD symptom cut score
CHADIS sends email, online consent to get Teacher Vanderbilts online

Example of Monitoring Scaled Scores for Depression

Patient Health Questionnaire-9 Modified

Score

Date

Depression
Problem Solving Counseling

• Increases asthma control without changing medication via improved adherence in adult patients (BOAT study)
• Still directive but taking into account patient barriers

Patient Specific Template (PST) – e.g. Asthma

Incorporates scored results of asthma pre-visit tools to provide:

• Tailored Guidance:
  • NHLBI guideline-based decision support resources, especially for medications and doses
  • Pre-populated questionnaire results in an outline format
  • Clear ‘Next Steps’ tailored to each patient’s situation
  • *Problem solving counseling* for patient-specific adherence counseling
  • An eChapter for decision support
  • Graphical depiction of asthma tool results over time for shared decision making

• Automatic Documentation:
  • Automatic chart documentation with parallel resources for family

• Tailored Family Support:
  • A prefilled Asthma Treatment Plan, tailored to the patient
  • Automatically assigned patient-specific asthma education resources
Monitoring

- Schedule or ad hoc SMS or email reminders to do interval questionnaires
- Clinicians get weekly Asthma Status report on all their patients with: low adherence; worsening severity; moderate or severe severity/control rating
- Clinician can update Asthma Treatment Plan remotely

Overview of Results – Launch PST
Asthma Severity/Control & Adherence

Tailored Links to Next Clinical Steps
Teleprompter for Evidence-based Adherence Discussion = Problem Solving Counseling

Links to Decision Support
“Click to view” Video of Inhaler Technique

There are 2 major techniques when using a tube spacer. The choice depends on whether the spacer is being used with a mask (for infants and toddlers) or without mask. This video demonstrates the proper use of the spacer without a mask.

Automated Asthma Action Plan

Keep this plan with you at all times and be sure that someone has a copy wherever the child spends time (ex: the nurse at school or day care, coach at extracurricular activities, other family members, etc.).

**Green Zone** - Daily Plan when feeling well

When a child is FEELING GOOD it is called Green Zone. Symptoms: Not coughing, wheezing, short of breath, or chest tightness; Can play, exercise, sleep all night; Can do all usual activities; Needing rescue medicine less than twice a week.

Peak flow 80 - 100% of personal best

**Daily Controller Medicine:** Keep using daily controller medicine:

- Fluticasone/Flunisolide MDI 220 mcg (Dosage: 2 puffs, Frequency: 1 time/day)

**Triggers:** Avoid any smoke and avoid Plant pollen, Molds, Animals, Dust or dust mites to help prevent asthma attacks.

Exercise: Use rescue medicine 15 minutes before exercise (see list from rescue medicines).

When to call the doctor:

- Call the doctor for more medicine before you run out.

On Red Alert Days (poor air quality) limit outdoor exercise.

Always use a spacer or holding chamber like Aerochamber with pump inhalers. Rinse mouth after using a controller medicine.

**Yellow Zone** - Sick Plan to add to the Daily Plan if there is wheezing, cough, tight chest or short of breath.

Starting to get sick is called YELLOW CAUTION ZONE. Symptoms: Coughing, wheezing, chest tight, or short of breath; Waking up at night; Trouble doing usual activities like eating; Signs of a cold; Needing rescue medicine more than 2 times in 24 hours.
CHADIS Asthma Module Evidence & Benefits

National cluster randomized trial with 24 practices and 4860 children with asthma using MOC QI methodology.

Intervention group vs controls had:
- Fewer asthma attacks: less rescue medicine and steroid burst use
- Fewer asthma visits to doctor
- More children appropriately treated with controller medication (increased revenue from improved CQM)
- More children with stable asthma control
- Trend towards fewer ED visits and hospitalizations

- Linked PACCI to visit priorities increased evidence-based care during routine visits plus documentation for paid -25 extender
- PACCI tool is paid under 961690 (health screen) and 99091 (monitoring)

Motivational Interview for Health Behavior Change

- Motivational interviewing is the best evidence-based method to produce health behavior change e.g. substance use; smoking; obesity
- Especially for cases of patient ambivalence about change
- Most clinicians have not been trained on MI
- Takes extra time

- Example: Adult risk behaviors- social determinants of health
Importance of Social Determinants of Health

• Screening is Recommended:
  • AAP Recommended Pediatric Screening and Assessment for Social Determinants of Health in 2013;
  • ACA (Partner Violence);
  • State Medicaid Recommendations (Depression Screen);
  • USPSTF

• Chronic Stress/Trauma associated with long term health problems (ACE study) - Early death (6 ACE = 20 years)

• ACE = Toxic Stress
  • “the excessive or prolonged activation of the physiologic stress response systems in the absence of the buffering protection afforded by stable, responsive relationships.”

Helping Chart a Positive Parenting Course

• Parent’s Adverse Childhood Experiences (ACE)
  • AAP recommended Pre-visit screen
• Parent’s Positive Childhood Experiences (PCE)
• Connecting past to present as needed
• Teleprompter of suggested language for helping them decide what they wish to create for their child
  • Option for sharing a pictorial illustration of concepts
• ?Best at 2 – 4 weeks of age
### Adverse Childhood Experiences

**Adverse Childhood Experiences (ACE) [Remove these responses]**
Submitted 3/7/17 by Alice Andrews (Mother)

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did a parent or any adult in the household often or very often...</td>
<td>Yes</td>
</tr>
<tr>
<td>Did a parent or other adult in the household often or very often...</td>
<td>No</td>
</tr>
<tr>
<td>Did an adult or person at least 5 years older than you ever...</td>
<td>No</td>
</tr>
<tr>
<td>Did you often or very often feel that...</td>
<td>No</td>
</tr>
<tr>
<td>Was a biological parent ever lost to you through divorce, abandonment,</td>
<td>Yes</td>
</tr>
<tr>
<td>Did you ever live with anyone who was a problem drinker or an alcoholic</td>
<td>No</td>
</tr>
<tr>
<td>Was a household member depressed or mentally ill or did a household</td>
<td>No</td>
</tr>
<tr>
<td>Did a household member go to prison?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Positive Childhood Experiences

**Positive Childhood Experiences [Remove these responses]**
Submitted 3/7/17 by Alice Andrews (Mother)

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growing up, would you say your relationship with your biological mother was:</td>
<td>Good</td>
</tr>
<tr>
<td>Growing up, would you say your relationship with your biological father was:</td>
<td>Noneexistent</td>
</tr>
<tr>
<td>How often did someone give you a hug when you did something well or when you were very good?</td>
<td>Often</td>
</tr>
<tr>
<td>How often were you told how great you were?</td>
<td>Sometimes</td>
</tr>
<tr>
<td>When I was little, a grown-up would sing songs to me.</td>
<td>Definitely True</td>
</tr>
<tr>
<td>When I was little, other people helped my mother and father take care of me and they seemed to love me.</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I've heard that when I was an infant someone in my family enjoyed playing with me, and I enjoyed it, too.</td>
<td>Probably True</td>
</tr>
<tr>
<td>When I was a child, there were relatives in my family who made me feel better if I was sad or worried.</td>
<td>Not Sure</td>
</tr>
<tr>
<td>When I was a child, there were grown-ups who would read stories to me.</td>
<td>Probably Not True</td>
</tr>
</tbody>
</table>
Help Addressing Parental Risk and other Social Determinants of Health

- **FASS PLUS** (adapted from SEEK (Safe Environment for Every Kid))
- CHADIS provides the FASS Plus questionnaire and Patient Specific Template (PST) that has 14 items covering:
  - Food insecurity
  - Parental depression
  - Parental substance use
  - Life Stress
  - Harsh Punishment
  - Intimate Partner Violence (IPV)
- Two positive randomized trials in primary care pediatrics showed the effectiveness of the SEEK (Dubowitz, et. al.)
- SEEK has a top rating for strength of evidence in preventing child abuse from the California Evidence-Based Clearinghouse (CEBC)
- FASS Plus adds Motivational Interviewing style questions if help is declined
Family Stress Patient Specific Template

- Template of guidelines prepopulated by FASS results
- Links to graphics for shared decisions
- Provides teleprompter suggested Motivational Interviewing to motivate action
- Automatically creates summary report
- Sends educational materials to family’s Portal automatically or by clinician selection
- SMS messages about parenting goals

Sample of the FASS Parent Screening for IPV

CHADIS

In the last year, have you been afraid of your partner?

- Yes
- No

Continue » Save Quit

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Sample of the FASS Intervention—Parent Screening for IPV

Lots of people have rough times in relationships. We'd like to help. Please tell us more. Please answer a few extra questions.

In the **last 2 months**, which of the following have you experienced from a partner? Please check ALL that apply.

- Physical fighting
- Yells at me, puts me down
- Threatens to hurt me
- Threatens to hurt the children
- Controls what I do
- Forced sex
- Injury that did not require medical attention
- Injury that required medical attention
- Something else
- None of the above
- Prefer not to answer

Continue ✕  Save ▻  Quit

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Sample of the FASS Intervention—Parent Screening for IPV

How much contact do you have with this person?

- Every day or most days
- Every few weeks
- Less than once a month
- No contact
- Prefer not to answer

Continue ✕  Save ▻  Quit

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Sample of the FASS Intervention—
Getting Help

Sample of FASS Intervention: Identifying Parental Barriers to Change
Sample of the FASS Intervention: PST Used by Clinician During Visit

Reflect on cons for change: “I (also) see that you’re worried about your partner getting mad.”
Empathize: “(And) You’re right that doing something about the problem has risks.”
Reflect on pros for change: “It sounds like while you are in a difficult situation, doing nothing has significant risks. Yet this is important because issues like these are known to be unpredictable and potentially dangerous. And it looks like it is already affecting your sleep, your friends.”
Assess for readiness: “Would you be open to talking to someone who is very experienced at dealing confidentially with difficult partner situations. It is also important to have an Escape Plan for your safety just

Reasons NOT to act...

*Partner might get mad
*Affection for partner

Reasons TO act...

*My sleep
*My friends
*My child/children
*Taking care of my child/children
Sample of the FASS Intervention: PST Used by Clinician During Visit

Printable Handout for Parents

Chadis - PST Care Portal Handout

Patient: John A. Jones, aged 2 years
Last Updated: Fri Feb 27 07:50:30 EST 2023
Doctor: Ray Stener (31)
Office: Bridge (310)

Receiving: Guardian of John A. Jones: All of the resources and notes listed below, including links to further information, can be accessed through the CHADIS website. It is in the same place where you also questionnaires. Log on to www.CHADES.com, click Go next to the child’s name, and click Go below Memory Book/Case Portal. Explore the Visit Notice and Resources links on your Memory Book/Case Portal page.

Care Portal Visit Notes:

- Dr. Ray Stener wants you to be sure you know how you can talk to someone by phone who can help you get help for partner difficulties and stay safe. You can also find an online plan if needed. Get confidential and free help at 1-800-799-SAFE (7233). Click Partner Issues Local Resources to check and see if your doctor has recommended local professionals or programs that should be helpful. If not, call the office.

- A note about a number to call if ever unsafe in your home, something all families should know:

All families need to know that there are places that can help if they ever feel unsafe in their homes. If you ever feel unsafe and need help, call 1-800-799-SAFE (7233) or 1-800-799-SAFE (TTY) or 206-787-3224 (Video Phone Only for Deaf Callers). If you or your family are ever in immediate danger, call 911 right away. You can also click Partner Issues Local Resources to check and see if your doctor has recommended local professionals or programs that should be helpful. If not, call the office.

Resources:

- Safety Plan for Victims Parent
- STD Partner Issues Handbook
http://resources.chadis/healthcare.org/resources/safety/partner_pdf

Domestic Violence

Do you feel safe in your current relationship? If not, you may be a victim of domestic violence.

Domestic violence is when one person hurts another person in a relationship. It can cause health problems - now and in the future. It can also harm your child’s emotional and physical health. The effects of domestic violence can...
Patient Engagement & Resources

MemoryBook Care Portal for Parents

Mike's Memory Book

3 years, 4 months
November 2013

Developmental Milestones | Edit This Entry | Add a Comment | Suggestions

Baby's First Time Grabbing At Clothes

The first time your baby grabbed or scratched at their clothes.

Comments:
- Susan Burgee: "She was wearing a yellow flowered jumper."
Child’s Milestones Documented

Developmentally Stimulating Activity Suggestions

Baby First Reaction To Their Reflection In A Mirror

Suggested Activities:

Let your baby see themself in a mirror. Place an unbreakable mirror on the side of your baby’s crib or changing table so that they can watch. Look in the mirror with your baby, too. Smile and wave at your baby.
Safety Guidance Appears in Portal

Individualized Parent Safety Text Based On Questionnaire Results

KEEPING YOUR BABY SAFE WHILE BATHING

1. FACTS ABOUT WATER SAFETY
   a. Babies do not have the head or body control in water to pick their heads or bodies up by themselves.
   b. Babies can drown if left alone for just a moment even in just an inch or two of water.
   c. Change the setting on your hot water heater to 120 degrees to prevent hot water burns.

2. HOW TO KEEP YOUR BABY SAFE
   a. Never leave your baby alone in the bathtub or in any other body of water.
   b. Hold onto your baby the whole time or be within an arm’s length of your baby (“touch supervision”) that baby is being bathed or in any other body of water.
   c. Bath seats do not hold babies securely, so do not depend on them to keep your baby safe.
   d. Your baby should be bathed only by parents or caregivers who understand the importance of safety in bathing and the risk of drowning (not young siblings, young babysitters, elderly relatives).
   e. Prevent distractions (such as making phone calls).
   f. Do not leave your baby for any distractions (such as incoming phone calls).

3. BATHING YOUR BABY
   a. Before bathing your baby, always run your hand through the bath water to test the water temperature to make sure the water is warm, not hot.
   b. If bathing your baby in the kitchen sink, do not run dishwasher and shower because hot water can come up in the sink drain. Also, do not flush toilets or use the shower at the same time, because this can suddenly change the water temperature in the sink.
   c. Drain bathtub immediately after bathing to prevent accidental drowning.
Resource Links

Parent Information Via Portal or Handout

What is asthma?

Asthma is a condition where there is inflammation in the lungs. Just like you get inflammation when you have a mild skin infection, so that your skin may be red, tender, and/or puffy, people with asthma have inflammation in their lungs. The inflammation causes the airways, which are like tubes in the lungs, to be narrower, so that it is hard to breathe. The inflammation is irritating to the muscles that surround the airways (air tubes), so that the muscles around the air tubes flex (contract), and squeeze the airways closed, which also makes it hard to breathe. As long as the inflammation is not controlled, the muscles around the airways will continue to be irritated and squeeze the airways closed.

How is asthma diagnosed?

There is not a medical test for asthma. A person is diagnosed with asthma when he or she has repeated episodes of asthma-like symptoms that improve with asthma medications.

How is asthma treated?

Asthma is treated with medication and by reducing exposure to the things that trigger asthma symptoms.

There are two kinds of medicines. One type of medicine treats the inflammation in the lungs, and the other type of
Assisting with Quality Improvement

Quality Improvement
Maintenance of Certification (MOC-4)

• Quality Improvement (QI) is proven methodology for changing processes, including in health care

• American Board of Medical Specialties provides Maintenance of Certification- Part 4 QI in Practice credits
  • Pediatrics, Family Medicine, Internal Medicine, Psychiatry

• Patient generated data + doctor’s decisions w/o additional data collection create run charts

• Physicians attend 3 CME sessions about QI by webinar

• Most include quiz for extra CME

• 25 MOC-4 credits and 60 CME credits available per course
Reliable Change Control Charts for QI

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Questions?

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