



CARE FOR KIDS



Early & Periodic Screening, Diagnosis & Treatment

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Healthy Mental Development in the Young Child: *The Case For Practice Change*

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Science Supports a Call for Change

New scientific understandings in child development document the need for health providers to alter their current practices. Research confirms that the foundations for learning, school success, interpersonal relationships, health, and general wellbeing are established well before a child enters kindergarten (VanLandeghen).

Emotional development in young children is now known to be as important as physical, cognitive, and language development. Research (Peth-Pierce) shows that children who do not reach age-appropriate social and emotional milestones are at far greater risk of school failure, which places them at increased risk for juvenile delinquency and welfare dependency.

Young children of depressed mothers are at particular risk for delays in school readiness, verbal comprehension, and expressive language skills. They are also 6 to 8 times more likely to be diagnosed with a major depressive disorder, and 5 times more likely to develop conduct disorders (Lennon). Services that support healthy mental development in young children have been shown to improve school readiness, health status, and academic achievement; they also reduce the need for grade retention, special education services, and welfare dependency (Peth-Pierce).

Evidence now suggests that early diagnosis and prevention increase effectiveness and efficacy, both

for children with social-emotional risk factors and for those with biologically based conditions (Knitzer, 2002). Indeed, well-designed early childhood interventions have been found to generate a return to society ranging from \$1.80 to \$17.07 for each dollar spent (Rand).

The health system is the one system that nearly all families have contact with during a child's first five years of life



What Needs to Change

The involvement of health care providers is essential to addressing the healthy mental development of Iowa's young children. The health system is the one system that nearly all families have contact with during a child's first five years of life. Studies also show that parents rely on their

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child's health care provider for developmental monitoring, and expect to get information from their provider about parenting and child development (Schor). Without your involvement, many developmental problems will go undetected until the school years, and key prevention opportunities will be missed.

Unfortunately, considerable evidence suggests that current practices are not working well. While 15-18% of school-age children have a developmental or behavioral disability, less than half are identified prior to starting school. Studies show that most health care providers rely on clinical judgment to assess a child's development; however, clinical judgment has been shown to detect fewer than 30% of children who have developmental concerns (Glascoe).

The challenge to today's health care provider is to establish office practices and processes that:

- Provide consistent, systematic surveillance of each child's development at every well-child exam, and identify risk factors
- Ensure that each child who needs it receives further screening or evaluation specific to the area of concern
- Identify and establish referral relationships with local social, educational, health, and other resources
- Seek input from parents about whether their methods are meeting the family's needs
- Involve colleagues, nurses, and office personnel in developing and implementing practice changes



Blueprints for Change

Two recent events can assist Iowa health care providers to better promote the healthy mental development of young children.

First, the American Academy of Pediatrics has published a policy statement on developmental screening (<http://aappolicy.aap-publications.org/>) that:

- Encourages surveillance at each well-child visit
- Recommends screening with standardized tools at specific intervals
- Provides an algorithm to help implement the policy

Second, Iowa's ABCD II Healthy Mental Development Initiative, a 3-year systems change effort funded by the National Academy for State Health Policy and the Commonwealth Fund, has produced recommendations for integrating developmental services into Iowa health care practices and communities (see page 4). These include:

- Defining a health care system that promotes the healthy mental development of Iowa's young children through three levels of care:

- Level 1:** Care for all children
- Level 2:** Care for children at risk
- Level 3:** Care for children with diagnosed developmental problems

- Developing guidelines for the identification of children at each of the three levels of care (see page 5; these guidelines are endorsed by many Iowa health provider associations).
- Designing and testing a surveillance tool for use at each well-child exam for children 0-5. The Iowa Development and Behavior Checklist can be used as a stand-alone tool. It can also be found within Iowa's Health Maintenance Clinical Notes (HMCN), which are age-specific forms that provide guidance to providers for all components of the well-child exam (see page 5).
- Identifying and recommending a short list of standardized screening tools in each domain (see page 6), tools that are recommended by a team of Iowa clinicians who practice in the field.
- Examining referral processes and testing a model process to support health care providers in linking families with appropriate community services (see page 4).

Opportunities for Your Practice

With funding from Iowa Empowerment and Medicaid, the Children's Hospital of Iowa Center for Disabilities and Development is partnering with the Iowa Chapter of the American Academy of Pediatrics to offer additional

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training, technical assistance, and mentoring to practices interested in implementing recommended practice changes. Learn more about the opportunities available to your practice from:

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“Childhood Development” has also been selected as a theme for the 2007 Iowa Medical Home Initiative Learning Collaborative for primary care practices. Learn more about this opportunity from:

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Resources

Glascoe FP. “Early detection of developmental and behavioral problems.” *Peds Rev* 2000.

Knitzer J. Building services and systems to support the healthy emotional development of young children (Nat Ctr for Children in Poverty, 2002).



Lennon MC et al. “Depression and low-income women: Challenges for TANF and Welfare-to-Work politics and programs” (Nat Ctr for Children in Poverty, 2001).

Peth-Pierce R. “A good beginning: Sending America’s children to school with the social and emotional competence they need to succeed (Child MH Foundations, 2000).

Rand Labor and Population Research Brief: Proven Benefits of Early Childhood Interventions, 2006.

Schor E. “Rethinking well child care.” *Peds* 2004.

Coming Your Way:

New Resource for Linking Families with Needed Services

Kay DeGarmo

Identifying young children at risk for developmental, behavioral, or social-emotional disabilities seems to accomplish little if the child has no access to follow-up services. Health care providers are often reluctant to adopt practices to screen young children unless they are confident that the children they identify will actually receive assistance.

Iowa Early ACCESS has been a consistent source of services for children who have or are at high-risk for developmental problems. Now Iowa Empowerment and a number of com-

munity public health agencies are developing services geared toward at-risk children and families. However, finding, tracking, and matching families to services is a complex and time consuming task that can be difficult to handle within the office practice setting.

Iowa’s ABCD II Healthy Mental Development Initiative examined referral patterns and tested a public-private partnership model to link children with appropriate community services. The next



issue of this newsletter will highlight what participants learned as they tested the partnership model in demonstration sites, and offer information about a new resource that health providers statewide can use to link families to resources.

Promoting the Social and Emotional Health of Children through Early Identification

Iowa's ABCD II Demonstration Project

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 Kay Leeper, MSN, Community Health Consultant,
 Children's Hospital of Iowa, Center for Disabilities and Development

This past December, Iowa's Assuring Better Child Health and Development II (ABCD II) project completed the testing of a model for a public-private system of collaborative practice to:

- Promote social and emotional health in children
- Develop stronger relationships among community resource networks

The primary objective of this project was to better equip primary health care providers with the tools and resources they need to provide systematic surveillance, screening and follow-up of a child's social-emotional development.

ABCD II goals included:

- Identifying, as part of each well-child exam, risk factors in the child and the family
- Connecting providers to a network of resources to help carry out an integrated plan of care that responds to a family's strengths, needs, and choices

Rural and Urban Demonstration Sites

Two group practices, an urban pediatrics practice and a rural family medicine practice, agreed to implement the model. Evalua-

tion was based primarily on audits of medical records for children who received Medicaid services, information in public health records from care coordinators assisting families, and feedback from medical professionals about the costs and benefits of changes in their practices. Providers were given:

- Health Maintenance Clinical Notes forms that include the Iowa Development and Behavior Checklist (see page 5)
- Iowa guidelines for the identification of young children at three levels of care (see page 5)
- Referral resources

- Training on such topics as social-emotional concerns in the young child, autism, and maternal depression

Surveillance/screening Rates

At baseline, surveillance/screening for general developmental problems was adequate for 89% of children in the urban pediatric practice and 70% of children in the rural family medicine practice (see tables 1 and 2), indicating reasonably capable screening performance in both group practices, but especially in the pediatric practice. After implementation of the enhanced surveillance/screening

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Percentage of Adequate Screens

Table 1. Urban Pediatric Practice

| Domain | Baseline | | Post-Intervention | |
|-------------------|----------|------------|-------------------|------------|
| | Cases | Percentage | Cases | Percentage |
| Development | 207/232 | 89% | 245/24 | 998% |
| Social-emotional | 151/232 | 65% | 237/249 | 95% |
| Family stress | 0/23 | 20% | 201/249 | 81% |
| Parent depression | 0/23 | 20% | 133/249 | 53% |

Table 2. Rural Family Medicine Practice

| Domain | Baseline | | Post-Intervention | |
|-------------------|----------|------------|-------------------|------------|
| | Cases | Percentage | Cases | Percentage |
| Development | 118/168 | 70% | 133/151 | 88% |
| Social-emotional | 60/168 | 36% | 135/151 | 89% |
| Family stress | 0/16 | 80% | 121/151 | 80% |
| Parent depression | 0/16 | 80% | 114/151 | 75% |



Recommendations for Implementing Iowa Medicaid Guidelines:

Identifying Young Children with Developmental or Behavioral Concerns

LEVEL 1: Surveillance for All Children

GUIDELINE: Every EPSDT well-child exam for a child 0-3 years must include:

- Surveillance of cognitive, motor, language, adaptive, and social-emotional development
- A review of:
 - Developmental milestones
 - Social, emotional, and behavioral health, including early signs of autism
 - Family risk factors, including parental stress and maternal depression
- Eliciting and addressing parental concerns about the child's growth and development



OPTION 1 Meets current AAP recommendation for surveillance at each well-child visit.

Recommended protocols & tools

Either of these tools may be administered in the office by the health care provider and nurse teams. Each:

- Is age-specific for each standard well-child visit up to age 5
- Provides a checklist of developmental and social-emotional milestones, and screens for family risks
- Can be downloaded free at the link provided
- Is easy to insert into an electronic medical record

Health Maintenance Clinical Notes (HCMN)

<http://www.iowaepsdt.org/ScreeningResources/clinNotesForms.htm>

HMC Notes gather information on such topics as nutrition, medications, immunizations, and lead screening. The checklist format makes it easy to gather information and to provide anticipatory guidance. HMC Notes also contain the Iowa Development and Behavior checklist discussed below.

OR

Iowa Development and Behavior Checklist

Administration and interpretation of this tool take 3-5 min. If a child cannot execute an activity that about 90% of other same-age children are able to perform, this is a "red flag" that signals the need to refer the child for further assessment.



OPTION 2 Health care providers who do not choose to use either of the tools above should complete comprehensive surveillance in **all three domains** below during the well-child exam.

1. Domain: Development

One of the developmental questionnaires below can be completed by a paraprofessional with the parent, or by the parent alone, and then reviewed by the primary health care provider. All children with speech delay should be referred for audiological evaluation.

Recommended tools include:

- PEDS -- 0-8 yrs** (Glascoe 1998), http://www.pedstest.com/test/peds_intro.html
- Ages and Stages, 2 mo.s to 5 yrs** (Bricker and Squires 1999), <http://www.pbrookes.com/>
- Child Development Inventories, 3 mo.s to 6 yrs** (Ireton 1994), <http://www.childdevrev.com/index.html>

2. Domain: Social-emotional and behavior, including autism

Administer a screening questionnaire at intervals determined by the health practitioner. Please note that the AAP also recommends specific screening for autism at 18 months.

Recommended tools include:

- Ages and Stages - Social-Emotional (ASQ-SE, 2002)**, <http://www.pbrookes.com/>
- Brief Infant-Toddler Social and Emotional Assessment (2000)**, <http://www.childdevrev.com/index.html>

3. Domain: Parenting stress and family risk factors

The practitioner should review for post-partum depression during the first few newborn visits and periodically check for parenting stress, parental depression, and other family risk factors.

Recommended tools include:

- At the first visit:** Pediatric Intake Form, available from Bright Futures
- At subsequent visits, at least annually:** Pediatric Intake Form

In addition to the routine Level 1 surveillance described above, the AAP recommends periodic screening using a standardized tool at 9, 18, and 24-30 months.

LEVEL 2: Screening for Children at Risk

GUIDELINE: Every child 0-3 years old who is identified as at-risk during a well-child exam, as well as for any child the provider feels should have additional screening, must receive Level 2 screening. If one of the standardized tools recommended below was used during surveillance, or if the provider feels it is indicated, proceed to Level 3 assessment.

1. Developmental Screening

A health professional should provide screening; paraprofessionals may assist with administration of parent report scales. The AAP recommends developmental screening for all children at 9, 18 and 24-30 months. All children with speech delay should be referred for audiological evaluation.

Recommended tools include:

| Agnes and Stages (ASQ, 2 nd ed.) www.brookespublishing.com | Bayley Infant Neurodevelopmental Screen (BINS) 1995 www.psychcorp.com | Brigance Screens (2002) www.curriculumassociates.com | Denver II (1992) www.denverii.com/DenverII.html |
|---|--|---|---|
| Sensitivity 70-90% | Sensitivity 75-86% across ages | Sensitivity 70-82% across ages | Sensitivity 56-83% |
| Specificity 76-91% | Specificity 75-86%, across ages | Specificity 70-82% across ages | Specificity 30-80% |
| Age 0-60 mo.s | Age 3-24 mo.s | Age 0-90 mo.s | Age 0-72 mo.s |
| Administration Parents complete | Administration Direct elicitation | Administration Infant/toddler, Parent report. Early preschool, direct elicitation | Administration Direct elicitation |
| Time 10-15 min, less if parent completes alone | Time 10-15 min | Time 10 min | Time 15-20 min |
| Languages English, Spanish, French, Korean | Languages English | Languages English, Spanish | Languages English, Spanish |
| Cost \$12.41-16.68*; \$4.60 if parent completes alone** | Cost \$22.22-\$26*; \$10.45 for materials** | Cost \$11.68 for materials and time** | Cost Complete kit \$90; 100 test forms for \$25 |
| Comments Single, pass/fail scoring; reading level varies per question from grade 4-12 | Comments Cut scores for low, moderate, or high risk in domains; training helpful for checking reflexes and tone. | Comments Helpful scoring software; cutoffs indicate potential giftedness, psychosocial risk | Comments Uses risk groups; classifies children as normal, suspect, or delayed |

2. Social-Emotional and Behavioral Screening

Screening by a health professional; paraprofessionals may assist with administration of parent report scales.

Recommended tools include:

| Agnes and Stages Social- Emotional (ASQ-SE, 2002) http://www.brookespublishing.com | Brief Infant and Toddler Social and Emotional Assessment (BITSEA, 2000) Contact authors BITSEA@yale.edu | Infant Development Inventory (IDI) and Child Development Review (CDR, 1994) CDR http://www.childdevrev.com/index.html | IDI http://www.childdevrev.com/index.html |
|---|--|---|---|
| Sensitivity 71-85% | Accuracy Fair to good | Accuracy Not known | Accuracy Good |
| Specificity 90-98% | Age 12-36 mo.s | Age 18-60 mo.s | Age 18 mo.s |
| Age 6-60 mo.s | Administration Parent completes 60 items | Administration Parent completes 6 questions, 25-item checklist | Administration Parent completes 1 page, 2 sides |
| Administration Parent completes | Time Unknown | Time Unknown | Time Unknown |
| Time 10-15 min, less if parent completes alone | Languages English | Languages English, Spanish | Languages English, Spanish |
| Languages English, Spanish, French | Cost Kit, \$99; \$35 for 25 test forms | Cost \$65 starter kit; \$11 per replacement materials | Cost \$65 starter kit; \$11 per replacement materials |
| Comments See ASQ, above | Comments Normed on diverse population | | |

3. PDD/Autism Screening

AAP recommends screening all children for autism at 18 months by a health professional; para-professionals may help administer parent report scales. If an autism screen is positive or a high degree of concern exists, refer for diagnostic assessment. Refer children with speech delay for audiological evaluation.

Recommended tools include:

| M-CHAT (2001) http://www.nas.org.uk/nas/jsp/ | Languages English, Chinese, Japanese, Spanish, Turkish |
|---|--|
| Sensitivity 5-87% | Cost Materials free; administration cost unknown |
| Specificity 5-99% | Comments Risk categorization scoring (pass/fail) |
| Age 16-48 mo.s | |
| Administration Parent completes | |
| Time 5-10 min | |

4. Parenting Stress/Family Risk Factors

Screening by health professional.

Recommended tools include:

Edinburgh Postnatal Depression Scale - EPDS (1987) five questions; in the public domain; free download. <http://www.dbpeds.org/articles/detail.cfm?TextID=485>
Parenting Stress Index Short Form (1995) <http://www.parinc.com/product.cfm?ProductID=127>

LEVEL 3: Assessment for children with developmental or social-emotional concerns

GUIDELINE: Refer all children 0-3 who do not pass standardized screening, or who, in your opinion, require further evaluation, for systematic, comprehensive assessment. This assessment should include standardized measures of the child and family functioning, and should provide a diagnosis as well as a treatment plan.

Recommended protocols & tools

Professionals who provide testing as authorized by their scope of practice should determine domains to be tested.

Table footnotes

*Resource-Based Relative Value Scale (RBRVS) used to calculate Medicare rates, as reported in "Estimating the Cost of Developmental and Behavioral Screening of Preschool Children in General Pediatric Practice," *Peds* 108:4 (Oct 2001).

** <http://www.dbpeds.org>

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procedures, rates of adequate screening increased to 98% in the pediatric practice and 88% in the family practice; only 22 of 400 children did not get adequate developmental surveillance.

Screening for social-emotional problems was lower in both practices at baseline than it had been for general developmental problems, with adequate screening for 65% in the pediatric practice and 36% in the family practice. When records were reviewed after implementation of the model, screening rates improved to 95% in the pediatric practice and 89% in the family practice.

Neither practice provided systematic screening for family stress or parental depression at baseline. Screening improved dramatically when practices were provided with a simple surveillance/screening tool for this purpose. Family stress was adequately reviewed in 80-81% of cases seen at follow-up, while risk for parent depression was reviewed in 53% of cases seen in pediatrics and 75% of cases seen in family medicine. The somewhat higher depression screening rates in family medicine were accompanied by physician report that family physicians were accustomed to interviewing and treating parents for personal problems, while pediatricians felt less comfortable raising these questions with parents during an evaluation that focused on the child.

Provider Comments

While providers recognized the potential value of including social-emotional, developmental, and family risk screening and follow-up in the well-child exam, they were wary of the extra time and work the surveillance/screening might require. "Initially," commented one pediatrician, "I thought, 'How much time and work will this be? It's going to throw us off kilter.' Then after hearing about it, I thought it made sense."

A family physician said, "It is more structured than before, a more organized approach. It takes a little more time, but not much." Another commented, "Many times you

didn't think about those things until a child isn't doing them. Now we are being more attentive to those types of problems."

Apprehension also existed about asking adult caretakers about maternal depression and other socio-emotional risk factors. These

doubts generally disappeared as providers became more accustomed to doing the screening and realized how it helped children and families. "Maternal depression is an easy question to avoid because it deals with the mother or caretaker, but it is an important issue that affects children," said a pediatrician. "The screening is a great way to begin a dialogue with parents. It is a start; doing something is better than doing nothing."



A pediatric nurse commented, "Parents seemed to appreciate that we cared. As our comfort went up, so did the parent's." A family physician noted that the "physical development red flags didn't change. That is straightforward. It was the emotional support that was new."

"...screening is a great way to begin a dialogue with parents..."

Another pediatrician remarked, "The project has been very helpful—especially with a good team of providers in the clinic and in the community where everyone knows their role."

"Parents...felt they were cared about. It built rapport."

"Better be incorporating this into medical training. This is a solid framework."

Providers from both practice sites agree they will continue using the model. They believe the social-emotional component is useful in drawing out concerns from parents; as one provider said, "The HMCN forms were good in identifying risk history and concerns from parents. Parents were glad to hear providers asking those kinds of questions and felt they were cared about. It built rapport." And parents commented, "No one has ever asked me about that before."

Both pilot sites made valuable suggestions about ways to improve the HMCN forms and to spread the concept of the surveillance/screening model to other Iowa primary care practices, both pediatric and family medicine.

As one provider noted, "Better be incorporating this into medical training. This is a solid framework."

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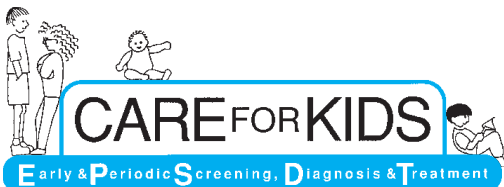
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b. 1,000 to 2,000 f. 20,000 to 30,000 i. 100,000 to 250,000
c. 2,000 to 5,000 g. 30,000 to 50,000 j. 250,000 or more
d. 5,000 to 10,000

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