

Screening Infants and Young Children for Developmental Disabilities

Committee on Children With Disabilities

Early identification of children with developmental disabilities leads to effective therapy of conditions for which definitive treatment is available. However, even in those instances in which the condition cannot be fully reversed, early intervention improves children's outcomes and enables families to develop the strategies and obtain the resources for successful family functioning. Much of the impact of early intervention results from fostering a more comfortable and developmentally appropriate interaction between the parents and their child with a disability.

DEFINITION

Screening is a "brief assessment procedure designed to identify children who should receive more intensive diagnosis or assessment."¹ Early childhood developmental screening does not consist of administering a single instrument at one point in time, but rather is a set of processes and procedures used over time. The following guidelines are recommended by the Task Force on Screening and Assessment of the National Early Childhood Technical Assistance System¹:

- Screening should be viewed as a service and part of the intervention process.
- Screening processes, procedures, and instruments should only be used for their intended purpose.
- Multiple sources of information should be utilized.
- Screening should be performed on a recurrent or periodic basis.
- Screening should be viewed as only one path to further assessment and the acquisition of services, with social and medical risk factors also being considered in decisions about evaluation and intervention.
- Procedures should be reliable and valid.
- Family members should be included as part of the process.
- Screening is more effective when familiar tasks and settings are used.
- Procedures must be culturally sensitive.
- Screening should be performed by individuals with training in the procedures.

Screening does not measure a child's intelligence quotient, rather it is aimed at identifying those children who may need more comprehensive evaluations. Such evaluations may lead to the development of an interdisciplinary comprehensive plan of remediation for a child with a disability, to a realization

that there is no significant problem, or to a decision that further observation is warranted.¹ The act of screening also serves the purpose of clearly communicating to parents the pediatrician's interest in the development as well as the physical health of the child.² If appropriate, the pediatrician should foster awareness and acceptance of the possible developmental disability.

Public Law 99-457 (reauthorized as Pub L 102-119, The Individuals with Disabilities Education Act)³ mandates early identification of, and intervention for, developmental disabilities. Since the passage of that law, the emphasis in screening has shifted to a younger age, with the current focus being on infants and children birth through 2 years of age.³ This is an age at which the pediatrician is very closely involved with children and families and is in a position to have significant impact on the course of the child's development. Public Law 99-457 and The Individuals with Disabilities Education Act have also led to the development of community systems for tracking of high-risk infants and resources for referring infants and young children for intervention. The emphasis on earlier identification creates the opportunity to provide the benefits of early intervention, but also poses greater challenges in the sphere of screening. Parents expect their pediatricians to give them guidance on developmental issues, but will turn to other community systems if the pediatrician does not fill this role. Children and families are best served when pediatricians' screening efforts are coordinated with the tracking and intervention services available in the community.

ISSUES IN METHODOLOGY

Delays or deviations in development may come to the attention of professionals and parents because the child is known to have risk factors by history, has physical findings or medical conditions likely to be associated with delays, or manifests delays at the time of observation. The first two factors are as useful in a very young child as in an older one, but some developmental delays are more difficult to assess early. A delay in a skill becomes evident only at the age when that developmental milestone is expected. For example, motor skills, which change rapidly in the first 2 years, are the easiest milestones to observe, but are the least predictive for future intelligence. Language skills are usually identified later but are better predictors of future intelligence and school performance.⁴

Developmental disabilities encompass a spectrum of problems of varying kinds and severity. Although

broad agreement exists as to what constitutes clear-cut delay or deviation, there is not complete consensus among professionals, or between parents and physicians, as to the severity at which evaluation and intervention become appropriate and when deviations from norms are sufficient to warrant further clinical attention. The central dilemma for the pediatrician who screens patients is that identification must precede services, and the act of identifying a child as one who needs further assessment for developmental disabilities provokes anxiety in parents. This concern may create a tendency to identify only markedly delayed children, denying other children potential access to needed care.

The limited ability of infant tests, whether intended for screening or definitive diagnosis of intellectual functioning, to predict future function has led to controversy concerning their use. However, when physicians use only clinical impressions, estimates of children's developmental status are often inaccurate.⁵ The advantage of screening instruments is that they state their norms explicitly, serve as a reminder to the pediatrician to observe development, and are an efficient way to record the observations.

The Denver-II, which is a successor to the Denver Developmental Screening Test, is a brief, validated test with which many pediatricians are familiar.⁶ Although it has been criticized for having limited specificity and therefore risks overreferring, it has high rates of sensitivity and identifies delayed children correctly in a high proportion of cases.⁷ Because the Denver II is intended to be used in the context of a process that includes other sources of information and multiple points in time, it is a useful part of the screening. The Early Language Milestones is another instrument suitable for office screening that was designed for identifying delays in language in children less than 3 years of age.⁸ A recent review of commonly used screening instruments is available.¹ Although there is still a paucity of adequately validated tests that are brief and can be used for infants, the growing interest in assessment of infants and young children will likely result in the development of new instruments and methods.

Because the screening process selects those children who will receive the benefits of more intensive evaluation or of treatment after evaluation, all children should be screened for developmental disabilities. Screening is not the same as evaluation, diagnosis, or planning of treatment and represents the first step leading to a multidisciplinary evaluation. In the optimal situation, each child should have a defined medical home for primary care, and screening procedures should be incorporated into the ongoing health care of the child.

SCREENING PROCESS

Essential components of the screening process are as follows:

- Sensitive attention to parental concerns
- Thoughtful inquiry about parental observations
- Observation of a wide variety of the child's behaviors

- Examination of specific developmental attainments
- Use of all encounters for observing and recording developmental status
- Screening of vision and hearing to rule out sensory impairment as a cause of the delay
- Observation of parent-child interaction.

REQUIRED SKILLS AND PROCEDURES

To screen for developmental disabilities and intervene with the identified children and their families, the primary pediatrician must have the clinical skills and institute the procedures listed below:

1. Maintain and update her or his knowledge about developmental issues, risk factors, screening techniques, and community resources for consultation and intervention
2. Acquire skills in the administration and interpretation of a formal developmental screening technique
3. Develop a strategy to provide periodic screening in the context of office-based primary care, including the following:
 - Developmental screening of all children in the practice
 - Recognizing abnormal appearance and function during health care maintenance examinations
 - Recognizing high-risk medical and environmental situations while taking routine medical and social histories
 - Actively seeking observations and concerns from parents about their child's development
 - Recognizing troubled parent-child interaction from history or observation
 - Performing periodic rescreenings of practice populations to discover the possible emergence of new risk situations or the child's difficulty in meeting more advanced developmental expectations
4. Maintain updated information on existing community resources for serving infants and children at risk for, or with, developmental delays and their families;
5. Maintain linkages with these resources and coordinate patient care with them;
6. Increase parents' awareness of developmental disabilities and of resources for intervention by such methods as display and distribution of educational materials in the office; and
7. Be available to families to interpret consultants' findings.

Ongoing involvement with the family permits the pediatrician to respond to parental concerns about the child's development when such concerns exist. When parents are not aware of a delay that is present, the pediatrician can guide them toward closer observation of their child and thus enable them to recognize the delay. Referral for evaluation and services can take place only after the pediatrician has succeeded in this challenging task. At that point the pediatrician's role shifts to one of involvement in the evaluation as appropriate, referral to available community resources for intervention and family support, assistance in understanding the evaluation results, assess-

ment and coordination of services, and monitoring the child's developmental progress as part of the ongoing pediatric care.

CONCLUSION

Early identification of children with developmental disabilities can lead to treatment or amelioration of the severity of a disability and its impact on the functioning of the child and family. Because developmental screening is a process that selects those children who will receive the benefits of more intensive evaluation, or of treatment, all infants and children should be screened for developmental disabilities, otherwise some may be denied access to needed care. Successful early identification of developmental disabilities requires the pediatrician to be skilled in the use of screening techniques and of developmental surveillance, to actively seek parental concerns about development, and to create linkages with available resources in the community. Because community systems vary from one locality to another and may change over time, the physician's information must be updated on a regular basis. Children and families are best served when the primary pediatrician providing health supervision services collaborates with the tracking and intervention services available in the community.

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