

Enhancing Developmentally Oriented Primary Care: An Illinois Initiative to Increase Developmental Screening in Medical Homes

abstract

In 2005, the Enhancing Developmentally Oriented Primary Care (EDOPC) project of the Illinois chapter of the American Academy of Pediatrics and the Illinois Department of Healthcare and Family Services began a project to improve the delivery and financing of preventive health and developmental services for children in Illinois. The leaders of this initiative sought to increase primary care providers' use of validated tools for developmental, social/emotional, maternal depression, and domestic violence screening and to increase early awareness of autism symptoms during pediatric well-child visits in children aged 0 to 3 years. These screenings facilitate identification of children at risk and those who need referral for further evaluation. Primary barriers to such screenings include lack of practitioner confidence in using validated screening tools. In this article we describe the accomplishments of the EDOPC project, which created training programs to address these barriers. This training is delivered by EDOPC staff and peer educators (physicians and nurse practitioners) in medical practices. The EDOPC project enhanced confidence and intent to screen among a large group of Illinois primary health care providers. Among a sample of primary care sites at which chart reviews were conducted, the EDOPC project increased developmental screening rates to the target of 85% of patients at most sites and increased social/emotional screening rates to the same target rate in nearly half of the participating practices. *Pediatrics* 2010;126:S160–S164

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KEY WORDS

early childhood developmental screening, Enhancing Developmentally Oriented Primary Care, EDOPC, developmental screening in the medical home, use of validated tools in well-child visits, Illinois early childhood screening initiatives, Illinois chapter, American Academy of Pediatrics

ABBREVIATIONS

EDOPC—Enhancing Developmentally Oriented Primary Care

FQHC—federally qualified health center

ASQ—Ages & Stages Questionnaire

ASQ:SE—Ages & Stages Questionnaire: Social-Emotional

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The American Academy of Pediatrics recommends formal developmental screening,¹ and referral for services through early-intervention programs has been shown to improve children's developmental outcomes.^{2,3} The Illinois chapter of the American Academy of Pediatrics and the Illinois Department of Healthcare and Family Services jointly formed the Enhancing Developmentally Oriented Primary Care (EDOPC) program. The EDOPC project works to improve the delivery and financing of preventive health and developmental services for children from birth to the age of 3 years, build on existing programs to develop a range of strategies in primary care settings to enhance practice change, and work with stakeholders to introduce or enhance existing public health policy and best practices.

A main goal of the EDOPC project is to help clinicians in primary care medical homes integrate routine developmental screening into well-child care.⁴ The EDOPC project defines routine developmental screening as documented implementation of validated screening tools for all children from birth to the age of 3—not just children who may be at risk on the basis of surveillance, clinical judgment, parent reporting, or some combination of these—at least once each year during well-child visits. The best developmental screening instruments have good psychometric properties, including adequate sensitivity, specificity, validity, and reliability, and have been standardized in diverse populations. Several parent-report instruments have excellent psychometric properties and require much less physician time than instruments that require direct examination.⁵ However, medical practice has not achieved widespread and consistent implementation of validated screening tools as a result of barriers such as lack of confidence, unfamiliar-

ity with such tools, and difficulty integrating screening into practice routines (American Academy of Pediatrics, American Academy of Pediatrics Periodic Survey of Fellows, unpublished data, 2000).

We report here on the accomplishments of the EDOPC project.

OBJECTIVES

The EDOPC project was designed to:

- increase the confidence and knowledge of primary care providers regarding the identification of developmental issues or delays;
- increase routine staff implementation of validated developmental screening tools during well-child visits; and
- determine the impact of technical assistance and support as tools to help implement consistent screening by using validated screening tools.

Although the EDOPC project also has addressed a series of policy and systems changes, we describe here the project's impact on developmental and social/emotional screening only.

METHODS

The information in this article is based on the project's experience from its inception in 2005–2007. The EDOPC project solicited primary care sites on the basis of targeted geographical regions (primarily in the Chicago, IL, metropolitan area) and site willingness to receive training and participate in pretraining and posttraining testing and evaluation.

The EDOPC project actively solicited federally qualified health centers (FQHCs) to participate in this project, because the FQHC mission and strategy requirements include improving the health status of underserved populations in targeted service areas. To accomplish this mission, FQHCs assess

the needs of the communities and populations they serve. On the basis of that assessment, the FQHCs design culturally and linguistically appropriate health service programs. This plan-based process enables FQHCs to provide resources that are culturally and linguistically unique and appropriate to the needs of the community and population served at that location, thus addressing some of the barriers faced in each community.

Over the project period, the EDOPC program conducted 336 trainings at 164 sites throughout Illinois on core topics for 2873 unique participants, including 165 trainings on developmental and social/emotional screening and referral. The EDOPC project conducted the majority of training sessions by using a practice-based (academic-detailing) model, and these sessions focused on practice systems change. Most training sessions included both clinical and practice administrative staff members. On the basis of sensitivity and specificity values and ease of integration into practice routines, participants were taught how to use 2 parent-report tools: the Ages & Stages Questionnaire (ASQ) and the Ages & Stages Questionnaire: Social-Emotional (ASQ:SE). In addition, because of the recognized need for cultural effectiveness, faculty members discussed how to speak to families generally and with consideration for what “developmental” and “social/emotional” issues might mean in a family's particular culture.

The EDOPC project distributed toolkits that featured literature, referral information, and sample tools to each site that received training. In addition, the program provided access to experts via telephone and e-mail and conducted monthly technical assistance conference calls for support and to monitor practice change. Facilitators used pretraining and posttraining

knowledge tests and simple evaluation forms at all sessions to determine if training had helped participants meet EDOPC project objectives. Specifically, participants used these forms to indicate whether the training had enhanced their ability to identify developmental delays and to indicate their intent to screen.

The EDOPC project used chart audits to determine if the proportion of young children screened for developmental issues in participating practices had increased after the introduction of EDOPC project training and technical assistance. EDOPC project staff encouraged these sites to participate in this evaluation because they had many providers and, therefore, had the potential to conduct more well-child visits than smaller sites.

The EDOPC project randomly sampled the medical records of 25 children aged 4 to 24 months at the chart-review sites before the site training and at least twice yearly thereafter to assess provider compliance with EDOPC screening recommendations, which included the following targets:

- implementation of the ASQ at least once by the 1-year well-child visit for at least 85% of the patients;
- implementation of the ASQ in the second year of life by the 2-year well-child visit for at least 85% of the patients; and
- implementation of the ASQ:SE in the second year of life by the 18-month well-child visit for at least 85% of the patients.

RESULTS

In 2007, >324 (90%) of the responding primary care providers believed that the training had improved their skills and confidence in these areas. It is interesting to note that a higher proportion of respondents in 2005 had indicated that the training had improved

their ability to identify developmental and social/emotional issues. One reason why the 2005 rates were higher could be that the groups that requested training first consisted of the most motivated providers and those who recognized that they lacked knowledge about screening and referring for developmental delays.

Compared with the pretraining baseline, the EDOPC project training increased the percentage of clinicians who intended to implement screening by >86% in 2005 and 2006 and by 102% in 2007. Although significant percentages of primary care providers indicated at before the test that they were already screening children for developmental delays and social/emotional issues, EDOPC project staff and faculty who visited participating practices reported anecdotally that few providers were actually using standardized tools and that screening, if occurring, was inconsistent within sites. Furthermore, the baseline chart audits confirmed these reports by revealing that before the EDOPC intervention, these sites had no documented developmental screening protocol and, instead, re-

lied on best clinical judgment, surveillance, parent reporting, or some combination of them.

Eighteen sites agreed to undergo periodic chart audits by EDOPC project staff to assess progress in implementing regular developmental and social/emotional screening, of which 16 (~10% of participating practices) were able to undergo baseline and at least 1 postintervention chart audit by 2007. The sites that underwent chart reviews included 11 FQHCs or FQHC look-alikes (clinics designated by the Health Resources and Services Administration to meet requirements in Section 330 of the Public Health Service Act), 3 residency training programs, and 2 private practices.

Developmental Screening, 1-Year Visit

As Fig 1 reveals, at baseline only 4 sites (25%) were doing any routine developmental screening, and they were only doing so in 4% to 32% of patients in the first year of life. By the most recent audit (performed at each site in 2007), 11 of 16 sites (68.8%) had met the objective of screening 85% of the children by the 1-year well-child visit, and

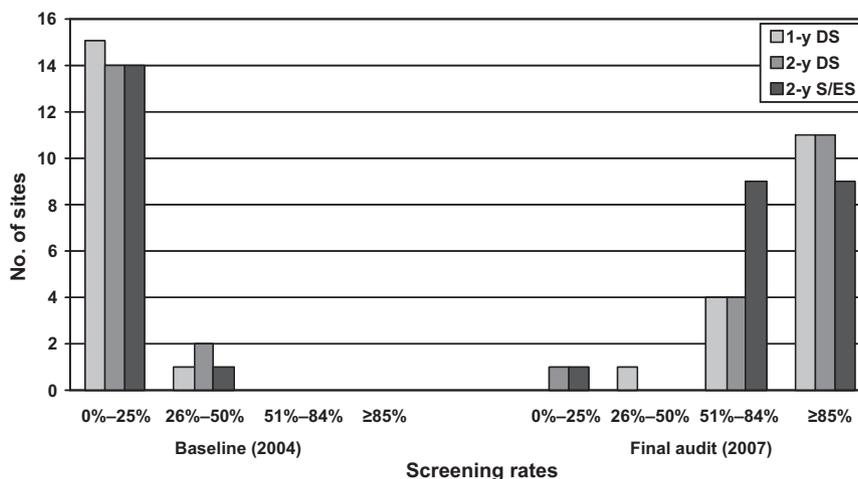


FIGURE 1

Routine developmental screening rates with the ASQ by the 1- and 2-year well-child visits and ASQ:SE by the 18-month well-child visit, 2004 and 2007. 1-y DS indicates diagnostic screening during the first year of life; 2-y DS, diagnostic screening during the second year; 2-y S/ES, social and emotional screening during the second year.

the other sites had screening rates that ranged from 48% to 83%. (For some cases in which training occurred in 2007, the first posttraining audit was also the most recent.)

Developmental Screening, 2-Year Visit

Fig 1 shows data from the 24-month developmental screening chart audit. At baseline, only 2 sites (12%) were routinely performing any screening for developmental delay, and only in 27% to 45% of the children in the second year of life. By the most recent audit (in 2007 at all sites), 11 sites (68.8%) met the objective of screening 85% of the children in the second year of life by the 2-year well-child visit, and all other sites had screening rates of 18% to 84%.

Social/Emotional Screening, 18-Month Visit

Fig 1 shows data from the 18-month social/emotional screening audit. At baseline, only 1 site (6%) was routinely screening children for social/emotional issues. By the most recent audit, 7 of 16 sites (46.7%) met the objective of screening 85% of the children in the second year of life by the 18-month well-child visit, and the other 53.3% of the sites had screening rates of 5% to 81%.

DISCUSSION

As evidenced by its name, the EDOPC project was conceived as a primary care orientation that respects parental input on child development and uses an evidence-based approach to increase early identification and referral of children with suspected developmental delays. The model—academic-detailing using trained peer educators combined with ongoing and consistent technical assistance—has been and

continues to be successful in facilitating practice change.

Primary care providers respond favorably to education about screening tools, and these attitudes can begin to address barriers to screening and increase practitioner confidence. Subsequent to an educational intervention, practice systems tend to increase their routine screening; however, such change occurs over time and with varying success.

Although the EDOPC program is unique, other American Academy of Pediatrics chapters have provided similar education, technical assistance, and monitoring through information received from other initiatives. For example, the Assuring Better Child Health and Development Program, funded by the Commonwealth Fund and administered by the National Academy for State Health Policy, helps states improve the delivery of early child development services for low-income children and their families.

We recognize the limitations of this study, which include a small and biased sample that underwent chart reviews, limited access to charts, and no formal analysis of the technical assistance and ongoing communication that the project used to ensure appropriate implementation and documentation of screenings. In addition, participants in the training sessions described here were self-selected and, therefore, are assumed to be interested in developing their skills and knowledge related to early childhood development. Furthermore, although the success in practices targeted for chart reviews indicates that interventions such as the EDOPC project can change practice systems, these practices, by virtue of their willingness to participate in chart reviews, may represent the most motivated providers.

The process of repeat visits to conduct chart reviews resulted in enhanced interaction with project staff and the provision of additional technical assistance at the chart-review sites that were not available to the other sites.

Finally, barriers to referrals subsequent to screening and the impact of these barriers on practice systems have not been fully examined. Although EDOPC leaders recognize that the lack of knowledge about referral options and a perceived lack of treatment options are barriers to screening, they did not evaluate these factors. The EDOPC project is collaborating with Illinois Early Intervention and the Illinois Department of Healthcare and Family Services to use claims and service data to explore referral issues.

CONCLUSIONS

EDOPC project training and technical assistance had a positive impact on confidence gained, intent to screen, and actual screening practice. The EDOPC project needs further evaluation of factors that lead to success in routine screening in primary care and barriers that prevent it. Additional work to examine the relationship between EDOPC project training and practice change across a broader population of primary care providers is needed.

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