ABSTRACT. The preparation of pediatric residents to function optimally in managed care environments challenges educators to create a new set of educational objectives and competencies and to incorporate these into curricula that are already full. Many of the skills needed to practice managed care are those that have been required for the practice of pediatrics in any setting. Nevertheless, the emergence of managed care requires the identification of new knowledge to be acquired and new skills and attitudes to be incorporated into daily practice. These competencies can be identified most thoroughly through collaboration among physicians, educators, and leaders of managed care organizations. This joint effort should also serve to establish a foundation on which collaborative, mutually beneficial learning environments can be created. The development of curricula that provide the opportunities needed to attain managed care proficiencies requires an individualized approach for each program that takes into account the degree of managed care penetration in each training environment. Programs in which a managed care approach to patient care predominates will be able to promote most easily their trainees’ incorporation of these principles into routine practice. Those with less regular exposure will be forced either to promote managed care principles in an environment in which they may not be accepted or practiced, or to join in partnership with managed care organizations (MCOs) to train residents. Regardless of the setting, evaluation methodologies must be developed to ensure that each of the core competencies has been learned, can be applied to clinical situations, and is retained throughout the training period.

These efforts require the development of faculty who understand and can model a managed care approach to patient management. The ongoing evolution of managed care systems encourages the development of new, creative strategies to train faculty, who may find themselves learning about this emerging environment at the same time as are their trainees. Pediatrics 1998;101:753–761; managed care education; graduate medical education; pediatriac training; curriculum development.

ABBREVIATIONS. MCO, managed care organization; PCP, primary care physician.

IDENTIFYING THE CHALLENGE TO EDUCATORS

As managed care becomes a dominant feature of modern medical practice, pediatric residency training will need to evolve new curricular content and educational experiences that will provide the skills necessary for the success of the next generation of pediatricians. Although it would be inaccurate and unfair to portray managed care as a one-size-fits-all form of health care delivery, a number of generic principles are widely accepted, although applied differently in various delivery systems. The hallmark of managed care is a shift from the treatment of individuals to the health promotion and medical management of populations. The principles needed to support this transition include the following:

• The focus on maintaining and improving the health of populations mandates a new emphasis on the promotion of wellness, prevention, self-education, healthy lifestyles, identification of at-risk individuals, screening, and early intervention.

• The relationship between the primary care physician (PCP) and patient is strengthened. The PCP, whether considered a care manager, coordinator, or gatekeeper, assumes a major role in identifying and allocating resources to meet the health care needs of individuals and the PCP’s patient panel.

• Although managed care does not necessarily imply capitation or full risk-sharing, the total available resources are fixed. The challenge for clinicians is to optimize care within these resources.

• Managed care plans attempt to minimize variability in the patterns of care provided to their enrollees, and eliminate therapies that consume resources while adding little or no benefit to their enrollees’ overall health.

• Managed care systems endeavor to provide care in the most medically appropriate and cost-effective settings.

• Care decisions, whenever possible, must be evidence-based and cost-effective.

• Managed care uses sophisticated information systems to facilitate health promotion and disease treatment and to monitor the outcomes of these services for the entire covered population.

These principles have produced changes in the approach to clinical medicine that affect hospitals,
physician groups, health plans, and insurance payers and, therefore, need to be emphasized during residency training. As residency programs adopt a slow pace of incorporating these concepts into their curricula, the discrepancies in patient management between current training models and future employment sites become increasingly apparent. Teaching these skills requires capable instructors who have experience using these principles and dedication to integrating them into the traditional educational curriculum. Educational role models who are unfamiliar with managed care concepts, and may not espouse them, can have significant difficulty imparting this new skill set to their trainees. The shift in patient management to the clinic, community, and home, rather than to the hospital, will stress graduate medical programs and their traditional educational systems. Equally difficult will be the challenge of shifting funding for graduate medical education to support educational efforts in the ambulatory setting. Despite these challenges, the concepts of full-risk capitation, pharmacoeconomics, quality assurance measures, and outcome-based compensation plans already are the realities of the work environment confronted by today’s graduates. Thus, it is imperative for the appropriate competencies to be learned, refined, and evaluated before their first day in practice.

THE IMPACT OF MANAGED CARE ON THE TEACHING OF TRADITIONAL CONTENT AREAS

At the same time that educators are challenged to impart a new set of managed care skills, the emergence of managed care in the teaching setting necessitates changes in the process of teaching traditional content areas. One of the more positive impacts of managed care in the teaching setting is to promote residents’ appreciation of the enhanced role of the primary care pediatrician. For many years, the increasing reliance on hospital-based medical care and technology yielded imbalances favoring a high ratio of subspecialists to general pediatricians on the faculty of most medical schools. More recently, the appeal of, and respect for, a career in pediatric primary care has been enhanced by a combination of factors, including the importance of the PCPs’ role in managed care environments, greater emphasis on generalist training promoted by revised requirements of the Residency Review Committee, increased compensation, and the reduction in subspecialty fellowship positions resulting from changing federal reimbursement and marketplace forces. Thus, residents may be increasingly motivated to concentrate on the primary care components of their training.

In addition to this attitudinal change, the emergence of managed care practice in the training environment already has begun to influence the manner by which residents learn traditional content. These influences include the following:

1. Reduced inpatient census and shortened lengths of stay reduce residents’ ability to conduct sequential diagnostic plans and to follow the results of therapeutic interventions.

2. A decline in emergency department visits may reduce opportunities for learning in that setting.

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**TABLE.** Sample Educational Objectives for a Managed Care Curriculum for Pediatric Residents

By the Completion of Residency Training, the Pediatric Resident Will Be Able to . . .

<table>
<thead>
<tr>
<th>Issues</th>
<th>Knowledge Objectives</th>
<th>Skills Objectives</th>
<th>Attitude Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical care</td>
<td>Describe the principles of population-based medicine</td>
<td>Use outcomes research for medical decision-making</td>
<td>Value prevention as a cost-containment measure</td>
</tr>
<tr>
<td></td>
<td>Describe guidelines for primary, secondary, and tertiary prevention</td>
<td>Apply practice guidelines to individual cases</td>
<td>Balance an individual (1:1) with a population (1:N) perspective</td>
</tr>
<tr>
<td></td>
<td>Discuss the benefits and limitations of disease management</td>
<td>Manage patients’ problems effectively over the telephone</td>
<td>Value a biopsychosocial approach to patient care</td>
</tr>
<tr>
<td>Patients</td>
<td>Explain the use of patient satisfaction measures</td>
<td>Use the physician–patient relationship for maximizing health care</td>
<td>Strive to improve and maintain high-quality physician–patient relationships</td>
</tr>
<tr>
<td></td>
<td>Contrast physician–patient relationship issues in managed care to those in other</td>
<td>Engage patients in participatory decision-making</td>
<td>Acknowledge the importance of patient education as a core element of effective health care</td>
</tr>
<tr>
<td></td>
<td>medical care systems</td>
<td>Design a personalized health maintenance plan, and negotiate it with a patient</td>
<td>Value a continuous relationship between patient and PCP</td>
</tr>
<tr>
<td>Systems</td>
<td>Distinguish managed care from other forms of health care, and contrast different</td>
<td>Perform a quality management investigation</td>
<td>Support cost-conscious approaches to health care</td>
</tr>
<tr>
<td></td>
<td>types of managed care methods</td>
<td>Design organizational methods to enhance continuity of care</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explain the principles of cost containment and utilization management</td>
<td>Use managed care terminology appropriately</td>
<td>Demonstrate a commitment to continuous quality improvement</td>
</tr>
<tr>
<td>Physicians</td>
<td>Explain how managed care organizations use performance reports to change provider</td>
<td>Apply ethical principles to managed care patient situations</td>
<td>Recognize the efficiency, added value, and cost-effectiveness of team collaboration</td>
</tr>
<tr>
<td></td>
<td>behavior</td>
<td>Collaborate effectively with other physicians and nonphysician providers</td>
<td>Understand the value of PCPs as coordinators of care and patient advocates</td>
</tr>
<tr>
<td></td>
<td>Discuss the role of primary care physicians in a variety of managed care settings</td>
<td>Interpret implications of written contracts between physicians and managed care</td>
<td>Demonstrate flexibility in adapting to health care system changes</td>
</tr>
<tr>
<td></td>
<td>Identify the responsibilities of team leaders and team members</td>
<td>organizations</td>
<td></td>
</tr>
</tbody>
</table>
3. The increasing importance of the PCPs’ case-management role, together with reluctance to use the emergency department, actually may increase continuity of care with PCPs, including residents in their continuity clinics.

4. Alternatively, annual switching (initiated by patients or employers) between ever more competitive health care plans may reduce long-term continuity of care.

5. Fewer referrals of common problems to subspecialists shifts some learning opportunities from the subspecialty clinics to the primary care clinics.

These changes must be acknowledged and should provide the impetus to generate new and creative strategies to ensure that learning is not compromised.

IDENTIFYING EDUCATIONAL OBJECTIVES FOR MANAGED CARE

The preparation of residents to practice in emerging managed care environments requires the identification of a new, requisite set of knowledge, procedural skills, and attitudes. Creation of such a skill set presents a significant challenge, because managed care practice settings will continue to vary, and the universe of competencies that might be included is vast. Many of these educational goals are not unique to managed care, but are required for the practice of pediatrics, regardless of payer. Indeed, The Ambulatory Pediatric Association’s Educational Guidelines for Residency Training in General Pediatrics\(^2\) includes, among its learning objectives, many of the topics typically defined as managed care proficiencies. Because there is such a strong focus on primary care in managed care, it is not surprising that the two competency areas overlap significantly.

The selection of specific educational objectives should begin with a needs assessment. This should incorporate input from multiple knowledgeable sources, including training program directors, general pediatricians (as well as PCPs from the other generalist disciplines), subspecialists, leaders of MCOs, representatives from schools of public health and business, patients, and residents. Input can be attained by means of individual interviews, focus groups, surveys, and reviews of earlier drafts of curricula.\(^3\) In addition to yielding important information, this effort may help to create a positive attitude toward the program by providing stakeholders with a sense of ownership. In the long run, this is likely to create more positive attitudes about managed care education and may generate additional cooperation and training resources for the residency program.

Jacobs and Mott\(^4\) surveyed managers of health maintenance organizations to sample opinions about physician traits and training experiences that were desirable for practice in those settings. In a summary of current thought about what to teach concerning managed care, Lurie\(^5\) emphasized the reports of the Group Health Association of America,\(^6\) the Pew Health Professions Advisory Panel on Health Professions Education and Managed Care,\(^7\) and the Council on Graduate Medical Education’s Sixth Report,\(^8\) as well as works by Rivo et al\(^9\) and Moore.\(^10\) She also compiled data from the several residency programs that already have begun to create managed care learning experiences. Unfortunately, many of these curricula were unpublished and, therefore, were not easily available to other institutions.

In outlining a set of learning objectives, it is possible to categorize managed care competencies as related primarily to medical care, patients, systems, and physicians. Sample learning objectives illustrating these categories are listed in the Table.

Medical Care Issues

As always, residents must develop clinical competency in the diagnosis and management of acute and chronic conditions. In addition, they must learn prevention and health-promotion strategies, and develop an appreciation of the importance of psychosocial factors in health and disease. To maintain a population-based perspective in the care of patient panels, pediatricians in training must be familiar with public health and epidemiologic principles.

Residents must understand the purpose, interpretation, and implementation of the practice guidelines and clinical pathways increasingly guiding health care decisions. Such guidelines are being used to impact health care on a national level, whether created by governmental agencies (eg, Bright Futures,\(^11\) US Preventive Services Task Force Guide to Clinical Preventive Services\(^12\) or commercial enterprises (eg, Miliman and Robertson, Healthcare Management Guidelines\(^13\), Institute for Clinical Systems Integration\(^14\)). Additionally, there is a strong trend for health care systems to develop their own clinical pathways, which may be based on published guidelines but are modified in response to local requirements and resources. To participate actively in the development of these guidelines, pediatricians must learn to critically analyze the literature to incorporate the results of studies into clinical decision-making (ie, evidence-based medicine). This knowledge will enable pediatricians to revise practice guidelines based on evidence-based analysis of the cost-effectiveness of care strategies and technologies that will emerge in the future. Additionally, they must develop a basic understanding of the guidelines increasingly being used to monitor both process and outcomes of medical interventions, such as the Health Plan Employer Data and Information Set (HEDIS).\(^15\)

Patient Issues

Pediatricians in training must develop significant skills in interpersonal communication. They must attain proficiency in various methods of patient education to empower patients to participate in shared decision-making. Patients’ membership in managed care plans adds a new dimension to the patient-physician relationship, which requires familiarity with the nature of the contract between patients and MCOs. They also must learn how MCOs solicit and interpret members’ viewpoints by using patient satisfaction surveys.
Physician Issues

Residents need to learn about provider contracts with MCOs, their legal components, and their impact on medical practice (eg, risk-sharing). Optimal function as a manager of care requires skills in teamwork and team leadership. Learners should become familiar with a variety of mechanisms by which their performance will be compared against national best practice (benchmark) standards and will be compared with the performance of other physicians in their health plan or that of similar physician groups.

Toward this end, the curriculum should include explanations of terms such as medical loss ratio, cost per member per month, hospital days per 1000 members, and Health Plan Employer Data and Information Set (HEDIS) 3.0 standards. Residents should understand that salaries and incentives may be based not simply on the volume of patient visits, but rather on their total panel size, costs expended in providing care to their panel, results of patient satisfaction surveys, compliance with guidelines and protocols, and the quality of the outcomes they achieve.

Trainees should be given opportunities to explore and discuss their own attitudes about managed care. Similarly, they should be encouraged to consider potential ethical dilemmas that might arise when they must weigh responsibilities to individual patients with those to the larger population they serve and to the MCO.

APPROACHES TO CURRICULUM DEVELOPMENT

The methods and timing by which these objectives and competencies will be taught is the curriculum. The number of these objectives, as well as the extent of their mastery, should be determined in consideration of both the desired outcome and the program’s ability to provide this education. Two programs sharing identical objectives are likely to develop very distinct curricula, each taking advantage of the unique characteristics of its trainees (attitudes, previous experience); setting (proportion of patients enrolled in managed care plans, academic center vs private hospital-based program vs managed care facility); faculty (extent of managed care expertise, role models engaged in managed care practice); and resources (computerized patient panel management capabilities, case-management cost reports). As mentioned previously, many of the objectives of education in managed care are identical to those required for all clinical practice, regardless of payer type. Although these may not need to be added anew to the curriculum, it should not be assumed that they are already being taught, and their presence in the curriculum should be scrutinized.

The variability of managed care penetration in different training settings requires an individualized approach for each program. At this time, the involvement of faculty in managed care practice is extremely variable, ranging from treating an occasional patient affiliated with a managed care plan to full commitment to a managed care approach for all patients. Inasmuch as the concept of managed care represents an approach to clinical medicine, it should be taught, optimally, throughout the period of training, through both application to patient care and didactic presentations. This is accomplished most easily in settings in which a large proportion of the patients participate in managed care plans, the faculty are committed to a managed care approach to all patients regardless of payer, and information systems support that effort. In such a practice environment, trainees internalize the principles of managed care through their daily, routine application and the role modeling of faculty, in both ambulatory and inpatient settings. Nevertheless, regardless of how successfully residents function in such an environment, it cannot be assumed that this daily immersion necessarily imparts a comprehension of the principles of managed care. Residents may not be familiar with the vocabulary associated with quality assurance (eg, continuous quality improvement), utilization analyses (per member per month), and outcome measures even though they have applied these principles in their practice. Moreover, residents learning in a single setting may not gain an appreciation of the multiple variations of managed care practice and may find themselves unable to apply the managed care principles they experienced during residency to a new environment. Therefore, practical experience must be supplemented by didactic presentations, case discussions, and reading, which should take place throughout the period of training.

Currently, most training programs have not experienced the major penetration of managed care patients or philosophy described above. One strategy that can be used by programs with little managed care exposure is to join in partnership with a MCO to provide this clinical experience during specific periods of training. This strategy supports current efforts to increase pediatric training in community settings.

Although residents are sent to sites of managed care expertise, such external educational referrals carry the risk of decreased control over the quality of teaching, as well as of the lack of assurance that the curriculum will be followed. A longitudinal
experience generally is superior to a block rotation. One approach is to schedule residents’ continuity clinics in these settings, thereby providing an ongoing, 3-year experience. A continuity experience with a faculty mentor in managed care will provide an excellent basis for learning.

The least favorable alternative is to schedule a single, 1-month block rotation in a managed care setting. This may be the easiest to schedule, and its value can be enhanced by ensuring that the resident will not be distracted by on-call or other responsibilities during the 1-month experience. Of course, the disadvantages of a single managed care experience are many, including the possibility that the clinical experience may precede the didactic series providing the theoretic construct, the lack of continuity of care, the inability to develop a patient panel, and the absence of learning reinforcement. An additional concern, common to the scheduling of most other rotations, is determining the optimal placement of a single, 1-month experience in the curriculum. The most favorable time for such a rotation may be in the second year, when the resident has enough clinical experience to appreciate how a managed care approach to patient care differs from the traditional paradigm and still will have adequate opportunity to apply the managed care principles learned during subsequent training. Nevertheless, a limited block rotation cannot be expected to provide the opportunity to learn as many principles, or to incorporate these into routine practice, as can be afforded through a longitudinal experience.

Finally, although their numbers are declining, there are training programs with very little exposure to managed care and without MCOs willing to participate as educational partners. Such programs face the difficult task of teaching the application of managed care principles largely through didactic presentations and theoretic case-management seminars, without the role-modeling and real-life examples so important in engaging and motivating adult learners. In these programs, the weekly continuity clinics may serve as the preferred settings in which to apply the principles of managed care practice. Even in the absence of a managed care environment, the continuity clinic preceptor can work with the resident and office staff to identify and describe the resident’s patient panel, identify risk factors and screening opportunities in that population, emphasize health maintenance and risk reduction, and review utilization management as applied to individual patients and to the panel. Although this effort is made more difficult in the absence of computerized information support services, the development of these monitors for the small clinic panel of patients may actively engage the resident and impart considerable understanding of the underlying managed care principles. Additionally, these programs can use managed care philosophies in the care of hospitalized patients, including an emphasis on the cost-effective use of medication and technology and discussion about alternative, more cost-effective sites for care delivery.

EVALUATION OF LEARNING

The principles involved in evaluating residents’ theoretic knowledge and practical application skills in managed care are identical to those involved in more traditional content areas. However, as is the case in many other disciplines, evaluations often are inappropriately limited to residents’ responses to a survey of their self-perceived level of comfort with the subject matter. An equally inadequate strategy is to evaluate performance by merely documenting residents’ attendance at didactic and clinical teaching opportunities. More objective methods of evaluating residents’ mastery of focused clinical skills have yielded disappointingly low results, falling far below the expectations of the clinical faculty that assumed that they had taught them so successfully.

Thus, as is the case with other content areas, the evaluation process must focus on the trainees’ attainment of the predetermined educational objectives and competencies. Residents should be provided a copy of the educational objectives and competencies during or before their orientation to the managed care experience, whether longitudinal or block rotation. It also is reasonable to inform the residents of the evaluation methodologies to be used to facilitate their understanding of expectations and to guide their subsequent study.

The selection of optimal evaluation methodologies should be determined in regard to the nature of each specific educational objective and clinical competency. A number of objectives, such as learning the different types of managed care insurance entities, may be reasonably tested by traditional, well-constructed written or oral examinations. Observation of clinical situations, often followed by case discussion, remains an effective method of evaluating certain clinical skills, despite the subjective and uncontrolled nature of this strategy. Clinical evaluations can be made more objective through the use of audiotape or videotape, which can be reviewed using predetermined, objective criteria. Another method for achieving this outcome is to conduct an Objective, Structured, Clinical Exam (OSCE), which is a series of evaluations of focused clinical skills performed on real or simulated patients, rated by a trained observer using predetermined scoring criteria.

Additional evaluation methodologies include chart reviews, quality assurance monitors, and utilization measures. These quality measures are commonly used in managed care settings. Therefore, their use during residency training provides the advantage of modeling realistic assessment tools that will be applied to the graduates after they have entered the managed care workplace. Additionally, the residents can be taught to use these instruments to self-assess their practice patterns, thereby increasing their understanding of the advantages and concerns related to these measures.

Attention must be directed at ensuring that residents’ learning of these skills is retained and reinforced throughout the training program. This is of particular concern in programs in which the managed care experience occurs in a single block rota-
tion, as discussed above. Regardless of which evaluation methodology is used, it may need to be repeated later in the program to assess skill retention.

Any measure of skill attainment during training is merely a proxy measure for the ultimate desired outcome, which is the graduates’ success in applying those skills in the actual workplace. Thus, it is worthwhile to attempt to obtain information about graduates’ success in applying what they have learned in their subsequent clinical positions. Duplication of the same evaluation methods used during residency training is not practical and may not be relevant to the practice of any individual graduate. Nevertheless, some measure of graduates’ success in the knowledge and application of managed care principles would provide valuable feedback to residency directors. In light of the rapid changes in managed care practices and outcome measures, this feedback will enable clinical instructors to modify their educational objectives periodically in response to the changing demands of the managed care programs in which their graduates will be expected to function.

FACULTY DEVELOPMENT

The extent to which residency programs function in systems of care that actively incorporate managed care concepts will significantly affect residents’ ability to attain relevant skills. However, even in training settings with reduced penetration of managed care experience, the knowledge and attitudes of their clinical instructors can aid substantially in residents’ acquisition of this knowledge. Traditionally, residency training has been driven by an apprenticeship model. Faculty development has been demonstrated to be particularly valuable in the recent movement of continuity clinics from hospital-based clinics to community-based offices. Similar efforts to enhance the faculty’s understanding and working knowledge of managed care practice can be expected to facilitate resident learning as well. Faculty development programs may not need to be specialty-specific. In fact, both efficiency and greater applicability of ideas may result when physicians representing a number of specialties, together with nonphysician, health-related professionals, experience a single curriculum designed to expand their practice skills. The Henry Ford Health System in Detroit has developed the Managed Care College for the purpose of upgrading the skills of its professional staff in such areas as team process, clinical guideline development and implementation, data management, and working with panels of patients to improve overall health status. As pediatric staff are exposed to this learning experience, their ability to mentor and teach residents about managed care should improve.

Several medical schools and academic medical centers are aligning themselves with integrated health care systems, many of which are actively engaged in the practice and refinement of managed care approaches to clinical practice. Such affiliations provide new opportunities for resident learning activities. Residency programs may actually be based in MCOs, with joint sponsorship by a medical school.

In the traditional paradigm, residents were rooted in the hospital and ventured only occasionally to community-based settings. In the future, teachers in primary care disciplines such as pediatrics may do well to consider a model in which the core educational experience occurs in community-based ambulatory centers, while residents rotate to various inpatient settings only as needed for essential, hospital-based learning activities.

The concepts of managed care are as deserving of academic inquiry as are other innovations in the delivery of medical care. Specific programs facilitating the development of research skills in managed care for academic faculty could be accomplished by scholar-in-residence opportunities or formal fellowship training.

No discussion of managed care would be complete without incorporating financial cost into the patient care process. As guidelines for practice are disseminated in scientific journals, it would be instructive to include cost comparisons of alternative approaches. Such cost implications should include consideration of hospital and office costs, home visits, and out-of-pocket expenses. This has already begun in some of the pediatric studies published by the American Academy of Pediatrics and the American Medical Association. As residents are exposed to studies on specific medical conditions, they will come to expect resource utilization information to be included in any careful analysis of scientific innovation.

Finally, the explosive availability of the Internet has potentially profound effects on how residents will be educated in the future. World Wide Web pages can become the repository for curricula and opportunities for additional learning for pediatricians both in training and in practice. Residency is only one step in a career of lifelong learning. All will not be determined by the development of new and creative residency programs, but much will be gained from the transformation of the classroom to emulate more closely the practice environments that graduate trainees are preparing to enter.

ACKNOWLEDGMENTS

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Developing Models for Pediatric Residency Training in Managed Care Settings, by Devries et al

DeVries and colleagues’ thoughtful suggestions for developing training models in managed care settings reveal a deep understanding and experience in a mature quality management system.

Not only do they offer ideas for providing comprehensive and flexible learning opportunities in quality management principles for residents and their mentors, they apply those principles to the system of training itself to constantly improve it. They go beyond assessing the impact of managed care on seizing opportunities to improve care and, ultimately, the health of children in these new and evolving environments. Additionally, they underscore two critical observations: 1) managed care is not one thing, and 2) substantial overlap exists between competencies required for excellent managed care and those for excellent primary care practice. For example, the emphasis in managed care on prevention and communication fits pediatricians’ traditional areas of expertise. The current wide variation in forms of managed care within and among regions of the country must be taken into account when designing curricula and choosing educational settings.

As we localize and implement variations of the models suggested by DeVries et al in pediatric residency training programs, it will be critical to keep the needs and preferences of children and their families in the forefront. For example, children and families could be included prominently and creatively both in conducting an assessment of needs in designing resident educational objectives for managed care and in evaluating the short- and long-term outcomes of training. Child advocacy within new health systems could be added to the authors’ excellent list of patient-centered competencies needed for managed care.

Finally, because today’s managed care delivery system is a work in progress,2 clinicians have an unprecedented opportunity to shape it. Physicians note marked differences among health plans in the same market in policies and practices that either promote or impede delivery of high-quality care.

They can use these critical observations to influence the redesign of inadequate systems, provided they are well versed in basic principles and concepts. DeVries and coworkers’ suggested educational approaches can help resident physicians develop the requisite knowledge, skills, and medical ethics to become not only practitioners but also builders of the US health care system of the future.

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COMMENTARY

Developing Models for Pediatric Residency Training in Managed Care Settings, by Devries et al

In the midst of all the confusion and stress brought on our institutions by managed care, it seems difficult to focus on the educational needs of our learners. We are barely figuring out how to respond to managed care systems ourselves—how can we teach others about managed care? Devries et al provide a thoughtful, logical approach to aid us in this educational process. They discuss educational challenges, recommend goals and competencies for learners, provide suggestions for curricula and faculty development, and describe ways to evaluate outcome. If you are looking for a quick fix or a simple “how-to-do-it” guide you will be disappointed, but this is the nature of the beast—our systems are complex and different, and no one answer will work for all.

LEADERSHIP

A comprehensive educational program on managed care, as described by the authors, will require leadership and initiative from at least one dedicated faculty member. This individual will need protected time for program development and monitoring; academic credit should be earned for these efforts. The faculty director needs the support of the residency program director and department chair. Resident support is important for all educational innovation; it makes sense, therefore, to involve residents in program planning and evaluation. This gives them a sense of ownership in the process and helps faculty select and monitor the various learning experiences. The continuity director and preceptors need to be involved, because continuity is where residents can learn skills in longitudinal case management. Faculty in other primary care departments and in schools of public health, staff from managed care organizations, and administrators and staff in our institutions can be helpful resources. But be cautious of delegating too much—residents need to learn our pediatric perspective on prevention strategies, case management, and clinical guidelines (given the adult orientation of most managed care systems).

TEACHING IN TIMES OF TRANSITION

I do not think the paper gives enough emphasis to the dilemma many programs confront in the midst of rapid change. When faculty are scrambling to learn and adapt to managed care, it may not be realistic to set up a comprehensive managed care educational program for residents. In this situation, I think we should accept our limitations, give up our traditional role as the wise and all-knowing teachers, and let the residents participate in the learning process along with the rest of us. Let them attend training sessions on managed care for faculty and practicing pediatricians; let them see us dealing with our frustrations and uncertainties and involve them in discussions about how managed care affects us and our patients. Encourage them to think about ways to adapt to change, how to learn new skills, and how to accept new professional responsibilities. What better way to give them first-hand experience about skills they will need for lifelong learning?

Finding Positive Settings

The best way to learn how to work well within a system is to work in a well-run system, where people feel empowered to help bring about positive change. This is not the situation in many of our teaching institutions. In this situation, I would recommend strongly offering a block rotation (in spite of all the limitations of block experiences) in a well-run managed care system and and/or in an efficient office. Eventually as we improve our own institutional practices, it will be easier for residents to learn how to practice top-quality, cost-conscious continuing care in an effectively managed health system.

SCOPE OF TEACHING

The authors have an excellent, comprehensive list of competencies and educational strategies. To oversimplify, I would summarize what I think is key, as follows. 1) Introduce broad principles and new terminology related to managed care—do not get bogged down trying to teach too many facts—rather, provide opportunities to apply principles and new terminology to actual cases. 2) Provide clinical experiences in which residents can practice good patient management in a cost-conscious, well-run health care system with preceptors who are positive role models (regardless of whether there are many managed care patients); provide at least some clinical experience in an effective managed care system. 3) Foster positive attitudes about adapting to change, working within systems to improve health care for children, applying new principles about managed care, and learning new skills.

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MEASURING OUTCOMES

The authors provide many useful suggestions about how to evaluate resident competencies in managed care. I would like to offer some that work well in the continuity setting. Let the residents assist with formal chart audits as part of teaching conferences, continuity clinic conference, or even morning report. Not only does this model strategies for continuous improvement, but it is a simple way to collect data for program and resident evaluation. Require residents to discuss all unusual orders for laboratory studies, x-rays, and referrals with the continuity preceptor. When the preceptor serves as gatekeeper for the residents’ practice, s/he can teach and monitor performance at the same time. Consider making copies of referral forms; let residents participate in audits checking these for appropriateness and cost. Use no carbon required prescription pads; keep copies and monitor use of expensive medications. Include items about managed care skills on regular evaluation forms used in continuity (eg, follows referral procedures properly; considers cost when ordering tests and prescribing medications). Encourage residents to participate in quality improvement processes that track patient outcomes (eg, asthma management, immunization delivery).

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