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PROMISING APPROACHES FOR STRENGTHENING THE INTERFACE BETWEEN PRIMARY AND SPECIALTY PEDIATRIC CARE

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INTRODUCTION

Across the United States, access to pediatric physician subspecialty care is worsening. Waiting times of 6 months or longer are not unusual for many pediatric subspecialty evaluations both among privately and publicly insured children and in urban and rural areas. Families, primary care providers, managed care organizations, hospitals, medical schools, and subspecialty societies are reporting persistent difficulties.

Several factors account for pediatric subspecialty capacity problems. In addition to the small numbers of physicians in almost all of the 30 pediatric subspecialties, several chronic childhood conditions are increasingly prevalent, including diabetes and obesity, asthma, attention-deficit/hyperactivity disorder, autism, and depression. Further, medical and surgical advances have extended the survival of many children with rare and complex conditions. Moreover, other causes of childhood morbidity, such as low birth weight and prematurity, unintentional injury, violence and abuse, and suicide persist at very high levels. Changing patterns of care and family preferences have also resulted in significant increases in the proportion of care provided by pediatric subspecialists. In addition, numerous system and financing gaps contribute to the pediatric subspecialty problems that the United States is currently experiencing.

Despite impressive efforts over the last decade to improve the availability of comprehensive care within a medical home, efforts to improve access to specialty pediatric care and collaboration with primary care have only recently been the subject of focused attention. In 2004, the federal Maternal and Child Health Bureau formed an Expert Work Group on Pediatric Subspecialty Capacity, comprised of leaders from the American Academy of Pediatrics, the American Academy of Child and Adolescent Psychiatry, the Association of American Medical Colleges, the American Board of Pediatrics, the Child Health Corporation of America, the National Association of Children’s Hospitals, Family Voices, State Title V Programs for Children with Special Needs, federal and state agencies, and leading medical schools and universities. Its objectives are threefold: 1) to define the scope of current and projected pediatric subspecialty capacity problems and their effects on morbidity, productivity, quality, and costs; 2) to identify promising approaches for improving collaboration among pediatric subspecialists and medical homes, reimbursement, continuing education and training, and state/regional delivery system networks, and 3) to develop recommendations and a tactical plan to improve access to pediatric subspecialty care within the context of comprehensive, community-based medical homes.

The goal of this report is to identify promising approaches for strengthening the interface between primary care and specialty pediatric care. The Expert Work Group believes that through more effective collaboration with medical homes, the availability of pediatric subspecialty care will be improved and ultimately health outcomes for all children will be enhanced, especially for those with chronic conditions. Without effective collaboration, the availability of comprehensive and high quality
medical homes for children can be compromised. For example, child and family medical history and expertise can be overlooked; preventive and primary care needs can be missed; communication between physicians and families can be delayed or incomplete; clinical information and test results can be unavailable; valuable time and scarce resources can be wasted; medical errors can occur; and dissatisfaction among all parties can be anticipated. The burden on families is particularly acute when information is not shared between primary care physicians and pediatric subspecialists.

To date, much of the literature on collaboration between primary and specialty pediatric care addresses access and referral problems, frequency and type of referrals, and communication issues. Far less has been written about the actual process of collaboration or the necessary elements of a collaborative system of care that need to be in place to support effective and efficient interface. Importantly, a new report, entitled Enhancing Collaboration Between Primary and Specialty Care Providers for Children and Youth with Special Health Care Needs, by Antonelli, Stille, and Freeman, describes a new framework for collaborative models of pediatric care, including practical tools for implementing medical home care plans and effective communication strategies with specialists and families. The authors of this report underscore the challenges associated with defining and evaluating collaboration.

"We are several steps away from being able to adequately evaluate the quality of collaboration in the Medical Home and its impact on patient care and health. We must first agree on what the essential elements of good collaboration are, and then we must find a way to measure them: timely communication, cooperation to increase the proportion of "met needs" for families, and establishment of a care plan multiple providers....When measures are established, health outcomes must be determined or at least health care process measures, that are sensitive to the quality of collaboration."

The examples identified in this report are practical examples that are being used to address pediatric subspecialty capacity problems. These promising approaches were identified through a combination of methods. In addition to conducting a literature review and soliciting examples from the Expert Work Group and other pediatric experts, we sought promising approaches through various listservs, including several from the American Academy of Pediatrics, the Association of Maternal and Child Health Programs, the National Association of Children’s Hospitals, and Family Voices. Each of the contributors was then interviewed by staff from the MCH Policy Research Center. The Expert Work Group made the final selection of promising approaches, recognizing that these are just a few examples of the many innovative primary/specialty collaborative approaches that are in place across the country.

Many other promising approaches for improving the interface between primary care providers and pediatric subspecialists are critically important but are not described in this report, including, but not limited to, telemedicine, care coordination/case management, expanded nurse roles, and informatics. We elected, instead, to focus on strategies that have not been widely written about.
The promising approaches in this report address referral approaches (transfer of care), consultation approaches (one-time or limited time), and collaborative management approaches (ongoing shared management and co-located services). They exemplify working examples used in various practice settings but should not be construed as a formal endorsement by the Expert Work Group, the American Academy of Pediatrics, or the Maternal and Child Health Bureau. Instead, they are presented as practical strategies to further the development of effective collaboration between families, primary care providers, and pediatric subspecialists. We encourage readers of this report to share other promising approaches or tools for referral, consultation, or shared management with the Maternal and Child Health Policy Research Center by visiting our website at www.mchpolicy.org or by contacting slimb@mchpolicy.org.
PROMISING REFERRAL PRACTICES

The promising referral approaches described below include examples of referral guidelines, pre-appointment management of referrals, referral management, and pre-visit contacts. For each approach, we provide a description and working examples.

1. Referral Guidelines

Referral guidelines generally define a recommended set of clinical thresholds that indicate the need for specialty care. They may also include specifications about initial diagnosis and management, ongoing management, and criteria for return to primary care. They are often developed by health plans and medical groups based on clinical standards of care and quality and utilization guidelines. As such, they may be specific to that system of care. Two referral guideline approaches are shown below - one for cerebral palsy from Madigan Army Medical Center in Tacoma, Washington, and the other for otitis media from the Institute for Clinical Systems Improvement (ICSI) in Bloomington, Minnesota. ICSI’s health care guidelines are also available for patients and families. (For more information, contact Madigan Army Medical Center’s Public Affairs Office at 253-698-1902.)
Health Care Guideline:
Diagnosis and Treatment of Otitis Media in Children

**Eleventh Edition**
May 2004

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These clinical guidelines are designed to assist clinicians by providing an analytical framework for the evaluation and treatment of patients, and are not intended either to replace a clinician's judgment or to establish a protocol for all patients with a particular condition. A guideline will rarely establish the only approach to a problem.

```
1. Caregiver or patient calls with otitis media-related symptoms or concerns
   - AD

2. Symptoms suggestive of otitis media?
   - AD
   - Yes
   - No

3. Triage for other illnesses and/or reassurance
   - AD

4. Schedule appointment within 24 hours
   - AD

5. Meets diagnostic criteria for AOM?
   - AD
   - Yes
   - No

6. Discuss prevention of otitis media
   - AD

7. Initiate appropriate treatment
   - AD

8. History of recurrent AOM?
   - AD
   - Yes
   - No

9. Consider prophylactic regimen
   - AD

10. Schedule follow-up in 3-4 weeks
    - AD

11. AOM resolved?
    - AD
    - Yes
    - No

12. Criteria for ENT referral met?
    - AD
    - Yes
    - No

13. Consider ENT referral
    - AD

A = Annotation
D = Discussion
```

**Symptoms Suggestive of Otitis Media**

- Children <3 Years
  - Instability
  - Fever
  - Night waking
  - Poor feeding
  - Coryza
  - Conjunctivitis
  - Balance problems
  - Hearing loss
  - Otalgia

- Children 3 Years and Older
  - Otalgia
  - Otoscopy
  - Hearing loss
  - Ear popping
  - Ear fullness
  - Dizziness

**Diagnostic Criteria for Acute Otitis Media (AOM)**

- Middle ear effusion
  - (seen on exam and/or confirmed by pneumatic otoscopy) with either:
    - Local signs of inflammation; or
    - Otalgia, otoscopy, irritability, restlessness, or poor feeding.

**Diagnostic Criteria for Otitis Media with Effusion (OME)**

- Middle ear effusion
  - (seen on exam and/or confirmed by pneumatic otoscopy) or abnormal tympanometry without signs or symptoms of AOM.

**Appropriate Treatment**

- Antibiotic regimen using criteria for first vs. second line antibiotics
  - or
  - Observation for mildly symptomatic children

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2. Pre-Appointment Management of Referrals

Pre-appointment management of patient referrals involves review of prior medical records and other pertinent information before a first-time specialty appointment is scheduled in order to determine the most appropriate care. In the approach we selected, developed by the Rheumatology Department at the University of Wisconsin Medical Foundation, the rheumatologist reviews each newly referred patient’s records prior to scheduling an appointment. Using a pre-appointment management intake form, office staff collect patient and referring provider information, reason for consultation, and location of pertinent records. This is supplemented with medical records, obtained via email or fax, and lab and x-rays, when necessary. The specialist reviews this information and selects one of the following options: 1) patient with appropriate indication is scheduled and appointments are classified as urgent or routine and also as brief, usual, or extended time; 2) further information may be requested before making a decision to schedule an appointment usually through consultation with the referring physician; 3) care may be continued with referring physician without specialty consultation typically through consultation with the patient and referring physician to provide coordinated care; 4) other more appropriate consultation may be arranged; and 5) appointment is not provided when a referral is inappropriate or records are not provided.

Evaluation results of pre-appointment management found that only 59% of new patients referred actually required a specialty appointment. Practice access and efficiency were improved. An estimated 45 minutes was initially spent each week by each of three specialists to complete pre-appointment management of more than 100 patients referred. Only about a third of the referrals required more than 3 minutes to review.10 (For more information, contact Tim Harrington, MD, at Tim.Harrington@uwmf.wisc.edu).
3. Referral Management Initiative

The Referral Management Initiative (RMI) at New York’s Children’s Health Project (and also at the Children’s Health Project in Washington, DC, Dallas, South Florida, and Los Angeles) is designed to assure that children in medically underserved communities have the necessary supports to access and complete a specialty referral. When a referral to a subspecialist is made, the primary care provider rates the severity of the referral problem on a 3-point scale so that immediate needs can be addressed within 24 hours, urgent needs within 2 weeks, and routine needs as soon as is possible given the availability of specialists. RMI case managers make the appointment with the specialist, and if a child with an urgent need is not able to receive an appointment quickly enough, the primary care provider contacts the specialist. Families also receive appointment reminders by phone, through the mail, or in-person by shelter staff. Prior to the visit, RMI staff ensure that there are no insurance obstacles. RMI covers the costs of transportation to the specialist or provides transportation when public transportation is unavailable, and an RMI staff person is available at the medical center to assist with navigation to the specialist’s office. After the specialist visit, an RMI staff person obtains the notes and gives them to the primary care provider. Translation services are also made available to families, if necessary, to ensure that they understand the results of the specialist visit.

Evaluation of RMI found that adherence to medical specialty appointments among homeless families with children increased dramatically from 7% to 61%. Many children who had previously foregone care were able to receive services, and serious health consequences were averted. In addition, RMI resulted in reduced time between referral and appointment dates; fewer transportation, language, and insurance barriers; and fewer communication difficulties between primary and specialty providers.11 (For more information, contact the Children’s Health Fund, 212-535-9400.)
4. Pre-Visit Contacts

Pre-visit contacts are intended to prepare providers in advance of a scheduled preventive or chronic care visit so that the visit can be used to plan for the future, not to review past events. In the model we selected, developed by Chapel Hill Pediatrics and Adolescents in North Carolina, children with special health care needs are first identified and assigned a complexity score based on how many chronic conditions they have and their severity. (1= a well-controlled chronic condition; 2= an evolving, unstable chronic condition or 2 well-controlled chronic conditions; 3= 2 or more chronic conditions, one of which is unstable; 4= any technology-dependent patient or patient with moderate/severe cognitive delays; +1 for language barrier; +1 for behavioral disorder; +1 for family/social complications).

The child’s physician then decides if a pre-visit contact with the family would be helpful, taking into account the complexity score. If so, a care coordinator contacts the family prior to the visit to obtain information on emergency room or specialist visits, hospital stays, lab tests or x-rays that occurred since the last visit and to ask if lab tests are likely to be required during the upcoming visit. The care coordinator completes the pre-visit contact form by asking about issues the family would like to see discussed during the visit. The physician is given the form as well as any consultation notes, lab results, or x-ray reports from other visits prior to the appointment. If lab work is required, appropriate lab slips are prepared, and the child/parent is given the option of application of anesthetic cream to the arm prior to the blood draw.

Chapel Hill Pediatrics and Adolescents Pre-Visit Contact

Date of contact:__________________
Patient______________________________________Chart ________________
Phone where reached______________
In order to be best prepared for your child’s upcoming visit, we’d like to know:

1. Has your child been to the Emergency Room since your last CHP visit? ☐ Yes ☐ No
   If yes, where?________________________________________________________
   For what reason?________________________________________________________
   Records of hospital stay?__________________________________________________
   Outcome/Recommendations?_________________________________________________
   ________________________________________________________________________

2. Has your child been hospitalized since your last CHP visit? ☐ Yes ☐ No
   If yes, where?________________________________________________________
   For what reason?________________________________________________________
   Records of hospital stay?__________________________________________________
   Outcome/Recommendations?_________________________________________________
   ________________________________________________________________________

3. Has your child seen any specialists since your last CHP visit? ☐ Yes ☐ No
   Who?_________________________________________________________________
   Where?________________________________________________________________
   Specialist note is in chart ☐ Yes ☐ No

4. Has your child had any lab data obtained or Xrays performed since last CHP visit?
   What?_________________________________________________________________
   Where?_______________________________________________________________
   Results on chart ☐ Yes ☐ No

5. Are there any forms or letters you’ll need to completed during this visit? ☐ Yes ☐ No

6. Do you anticipate your child needing lab work at your upcoming visit? ☐ Yes ☐ No

7. What are your three major areas of concern or topics you need addressed at this visit?
   1.
   2.
   3.
   Check Scheduling to be sure has adequate time!!!
Evaluation of the pre-visit contacts found high family satisfaction, with 80% reporting that the contact helped identify concerns to be addressed at the visit. More than 80% of families found the doctor’s awareness of specialty visits to be helpful. Pre-visit contacts also increased the likelihood that the provider would code for the extra time spent with the child and the complexity of the conditions and that sufficient appointment time would be allocated for the visit. (For more information, contact Jennifer Lail Wartman, MD at jlailmd@earthlink.net)
PROMISING CONSULTATION APPROACHES

The promising consultation approaches described below include examples of child psychiatry consultation and liaison, Title V pediatric subspecialty consultation, and family practice pediatric consultation.

1. Child Psychiatry Consultation and Liaison

Child psychiatry consultation and liaison approaches are designed to assist primary care providers in addressing a broad range of behavioral health needs and can include various elements, such as anticipatory support when serious psychological reactions are expected; case-finding support to assist with early detection of problems; education and training support to provide direct supervision, case conferences, and regular education; emergency response support to address urgent problems; and continuing and collaborative care support to assist with children who have chronic behavioral health problems.

In the approach we selected, called Targeted Child Psychiatry Services (TCPS), based at the University of Massachusetts Medical Center, in Worcester, Massachusetts, a regional team was established, comprised of two child psychiatrists, one pediatric mental health nurse clinical specialist with prescribing privileges, and one program coordinator. The team is responsible for providing consultation to primary care providers and, when indicated, transitional services into ongoing behavioral health care for children in central Massachusetts, so long as the point of entry is through the primary care provider. Twenty-two primary care practices participated and were able to obtain real-time psychiatric consultation by simply paging the child psychiatrist. Depending on the needs of the child and family, the consultation resulted in: 1) an answer to the primary care provider’s question; 2) referral to the team child psychiatrist for an acute psychopharmacologic or diagnostic consultation, and short-term treatment; or 3) referral to the community mental health system. The team also visited all 22 primary care practices once a year to discuss administrative, patient care, and educational issues.12

Evaluation of TCPS found that 1) half of all the referred children could be managed through a telephone consultation with the child psychiatrist within 20 minutes; 2) 16% of the referred children were scheduled within 3 weeks for a 90-minute evaluation to the university’s child psychiatry unit that resulted in a diagnosis and treatment plan and these children were then referred back to the primary care provider with consultation between the primary care provider and child psychiatrist to discuss the results of the evaluation and treatment recommendations; and 3) a third of children with more significant needs were referred to community mental health centers and other local behavioral services for ongoing care. In addition to access improvements, satisfaction among families and primary care providers increased.13 The Massachusetts Behavioral Health Partnership that manages behavioral health services for the state’s Medicaid primary care case management program is adopting portions of this demonstration to be implemented on a statewide basis. The new program is called the Massachusetts Child Psychiatry Access Project. (For more information about TCPS, contact Daniel Connor, MD at connor@psychiatry.uchc.edu.)
2. **Title V Pediatric Subspecialty Consultation**

Many state Title V Programs for Children with Special Needs support a broad array of specialty consultation arrangements and also multidisciplinary clinics to extend access to pediatric subspecialty care in underserved areas. The example we selected, *Pediatric Subspecialty Consultation/Education Support to Medical Home Providers*, comes from the *Illinois Division of Specialized Care for Children* (the state’s Title V program for children with special health care needs) and makes available some 20 pediatric specialties for consultation -- medical genetics, cardiology, gastroenterology, hematology-oncology, neurology, developmental pediatrics, ophthalmology, orthopedics, otolaryngology, pulmonology, urology, physical medicine, and plastic surgery. Medical home providers can call any of these pediatric subspecialists to ask about the management of a specific chronic health condition. The specialists provide an educational support role to the primary care provider and are reimbursed $300 to respond to 7 phone consults. Primary care providers are reimbursed for telephone consults with the specialist if the child is enrolled in the Title V program. (For more information, contact Charles Onufer, MD at cnonufer@uic.edu.)

3. **Family Practice Pediatric Consultation**

In many parts of the United States, particularly in rural areas, family physicians are the primary source of care for children with special health care needs. In the example we selected, *Ventura County Medical Center* operates a network of 8 family practice satellite clinics and a family practice residency program to provide a safety net of services for children throughout Ventura County, California. Using a pediatrician “anchor” and onsite specialist consultations from UCLA, Children’s Hospital Los Angeles, and Cedars Sinai, they have been able to provide primary care provider consultation support in pediatric dermatology, endocrinology, cardiology, hematology, neurology, oncology, and pulmonology. Pediatric subspecialists visit monthly with follow-up by the pediatrician to provide ongoing support to family physicians serving as medical homes for children with special needs. (For more information, contact Chris Landon, MD at chris.landon@ventura.org.)
PROMISING COLLABORATIVE MANAGEMENT APPROACHES

The promising shared management approaches described below include examples of service agreements, co-management and multidisciplinary arrangements, and co-located services. For each approach, we provide a description and working examples.

1. Service Agreements

Service agreements are developed in partnership between primary and specialty care to define what can be managed by the primary care provider and the process for making a prompt referral to specialty care and appropriate return to primary care. Service agreements have been used by the Epilepsy Collaboratives of the National Institute for Children’s Healthcare Quality (NICHQ), the Veterans Administration, and others. They consist of 1) core clinical competencies which describe the conditions that can be handled and the core services that will be provided by the primary care provider and the specialist; 2) referral agreements which include referral guidelines, work-up requirements, and preferred communication processes, including shared care plans; 3) access agreements which define waiting times for emergency and routine referrals, ongoing chronic care management, and questions, considerations, and evaluations; 4) graduation criteria for sending patients back to the referring physician; and 5) quality assurance agreements that identify standards of care, training and education processes, and measures to monitor care standards. The process for developing a service agreement involves two meetings with an objective facilitator. In advance of the first meeting, the primary care provider and pediatric subspecialist complete a draft service agreement and the specialist considers appropriate referral guidelines. At the first meeting, which usually takes 2 hours, the 2 parties identify common ground and resolve any differences in the agreement. Following the meeting, the primary care provider and the specialist seek feedback on the draft service agreement from their office or department. The second meeting is usually quite short; any changes are reviewed, and the two parties sign off. The first 6 to 8 months following a service agreement, when audits and adjustments are made, can be the most challenging.

Evaluation results show benefits for both primary care providers and specialists. Primary care providers are assured that their patients will be seen promptly, and specialists are assured that they will see only those patients requiring their services. Further, service agreements result in reductions in specialty demand, reduced waiting times for the PCP’s patients, and more timely feedback from the referral specialist. (For more information, contact Catherine Tantau at ctantau@gv.net.)

2. Co-Management and Multidisciplinary Approaches

Co-management and multidisciplinary team approaches are most often used for the care of children with multiple complex chronic conditions, bringing together various specialty resources available at a children’s hospital or academic medical center. In the example we selected, the Special Needs Program (SNP) at Children’s Hospital of Wisconsin and the Medical College of Wisconsin functions as a tertiary...
care/primary care medical home partnership for medically fragile children. These are children with uncertain or multiple diagnoses, involving 5 or more specialties, relying on multiple community services, and with frequent hospitalizations and tertiary clinic visits. Other factors considered are distance from tertiary center, major social problems, and transitions. The SNP consists of 4 nurses, 2 part-time physicians, one program coordinator, and one part-time administrative assistant. All patients have a pediatric nurse case manager to assist with communicating between the family and providers, accessing medical and non-medical services, and assuring seamless inpatient and outpatient care. A subset of patients also has a SNP physician responsible for coordinating with the PCP around the clock and preparing clinical care coordination summaries; providing inpatient, outpatient, and emergency room consultations; making home visits; and arbitrating among divergent specialist opinions and treatment options.

Evaluation results show fewer tertiary hospital admissions and shorter inpatient stays, increased clinic visits and specialist encounters, and increased emergency room visits due to SNP physician visits. Close to $5 million was saved in total hospital charges in 2004 among the 46 children served. Although specialist charges increased, hospital charges decreased substantially.17 (For more information, contact John Gordon, MD at jgordon@mcw.edu.)

3. Co-Located Services

Co-located services are designed to remove access barriers by having both physical and mental health services available in one location. In the example we selected, the Integrated Mental Health-Primary Care Program provides primary care and behavioral health services at 5 community-based general pediatric clinics that serve a predominantly Hispanic population in New York City. Psychiatrists and psychologists from Columbia University maintain a practice at each of the 5 clinics and are able to see patients on site as soon as a need is identified by the primary care provider. Psychiatric evaluation and short-term treatment services are available at the medical home, eliminating the need for referral to an outside specialist. Pediatricians and psychiatrists share information through an electronic medical record.

Evaluation results show benefits for both families and primary care providers – 86% of primary care providers reported improved access to psychiatric services, 95% reported being satisfied or very satisfied with the program, and 90% of families reported satisfaction with the program. Parent anxiety is reduced as is the need for emergency room or crisis services, and primary care providers receive continuing education as a result of their ongoing contact with the psychiatrists. (For more information, contact Daniel Hyman, MD at dah9024@nyp.org.)
The 30 pediatric subspecialties are adolescent medicine, allergy and immunology, anesthesiology, cardiology, clinical genetics, critical care medicine, dermatology, developmental-behavioral pediatrics, emergency medicine, endocrinology, gastroenterology, hematology-oncology, infectious diseases, medical toxicology, neonatal-perinatal medicine, nephrology, neurodevelopmental disabilities, neurology, ophthalmology, orthopedics, otolaryngology, pathology, pulmonology, psychiatry, radiology, rehabilitation medicine, rheumatology, sports medicine, surgical specialties, and urology.

A medical home, as defined by Antonelli, Stille, and Freeman, is “an approach to providing comprehensive primary care in a high-quality and cost-effective manner. In a medical home a primary care child health professional works in partnership with the family/patient to assure that all of the medical and non-medical needs of the patient are met. Through this partnership, the primary care child health professional can help the family/patient access and coordinate specialty care, educational services, out-of-home care, family support, and other public and private community services that are important to the overall health of the child/youth and family. The medical home is a model of providing care to patients and families that is accessible, continuous, comprehensive, family-centered, coordinated, compassionate, and culturally effective.” Antonelli RC, Stille CJ, Freeman LC. Enhancing Collaboration Between Primary and Subspecialty Care Providers for Children and Youth with Special Health Care Needs. Washington, DC: Georgetown University Center for Child and Human Development, 2005.

For more information, see www.mchpolicy.org.


Information based on interviews with Dr. Chris Landon, July 2005.


Information based on an interview with Dr. John Gordon, Medical Director of Special Needs Program and a presentation, “A Tertiary Care Center Special Needs Program Decreases Hospitalizations of Complex, Medically Fragile Children with Special Health Care Needs,” presented at the Pediatric Academic Societies Meeting, May 2005.

Information based on interviews with Dr. Charles Onufre, July 2005.


Information based on interviews with Dr. Charles Onufre, July 2005.