Comanagement of Medically Complex Children by Subspecialists, Generalists, and Care Coordinators

In North Carolina, ~5% or 57,000 children enrolled in Medicaid have complex medical conditions and account for >50% of the Medicaid dollars spent each year on the medical care of children. In 2012, Community Care of North Carolina (CCNC) received a Center for Medicare and Medicaid Innovations grant to establish the North Carolina Child Health Accountable Care Collaborative (CHACC) to address the health care needs of these children. Care coordination is an integral part of health reform activities, including many Medicare programs. CHACC appears to use a unique approach of targeting higher-cost pediatric Medicaid patients and placing specialty care managers in tertiary children’s services.1,2 CCNC serves North Carolina Medicaid beneficiaries through a statewide, community-based public–private partnership, providing care through medical homes using population management approaches to improve care and contain costs.3 CHACC encourages medical and other health professionals to improve quality and cost-effectiveness of care for children on Medicaid with complex medical conditions. A primary goal of CHACC is to ensure that every child with a complex illness has a medical home in the community where he or she lives and receives coordinated primary and subspecialty care to reduce care fragmentation and cost. One target is reduction of unnecessary emergency department visits and hospitalizations. Although hospital revenues will be affected, hospitals will be better positioned to compete in the value-based care environment.4 CHACC patients are all North Carolina Medicaid beneficiaries enrolled in CCNC for care, allowing seamless identification and clinical information exchange by CHACC staff who are CCNC employees.

Historically, CCNC has focused on primary care; however, CHACC bridges subspecialty and hospital-based care at 13 North Carolina hospitals with tertiary children’s services with embedded care coordinators. The care coordinators are nurses or social workers with pediatric clinical experience. Their activities include completion of a comprehensive assessment of patient and family needs, care plan development, referrals to community services, patient and caretaker education, and collaboration with providers and caregivers to facilitate transitions in care. They provide a “warm handoff” to the community-based CCNC care coordinators in primary care practices and serve as dedicated links between the subspecialist team and primary care professionals. Care plans for these children are posted...
Identifying the target population for CHACC enrollment is a continuing challenge. Nationally accepted tools for predictive models to identify children with complex medical conditions whose care may be “impactable” (quality improvement and cost reduction) have not been developed. To address this gap, North Carolina Medicaid claim data were used to help identify patient populations who may benefit from the program. In parallel, claim data for CHACC-enrolled children are being collected to determine impact on Medicaid costs, initially comparing CHACC patients with historical groups of similar patients. Advanced analytics are being developed to create predictive models to identify “impactable” patients early in their course, providing the opportunity for care managers to improve quality of care, comanagement, and cost reduction. To date, >1500 patients have been enrolled in CHACC in the first 6 months of the program. Collaborative learning is a key part of CHACC. At the 5 academic centers, work is under way to develop approaches for transitioning care to medical homes in the community using comanagement partnerships with subspecialists. For example, in a 29-county area of eastern North Carolina, the Department of Pediatrics at East Carolina University established the Center for Children with Complex and Chronic Conditions (C5) in 2008. From 2008 to 2010, C5 enrolled 234 children with complex conditions (eg, tracheostomies, gastrostomy tubes, ventilators, feeding pumps, cerebral palsy, intellectual disabilities, complex genetic syndromes) and began coordinating inpatient and outpatient care of these children. CHACC is aiding C5 with additional care managers and new communication links with primary care physicians. So far, C5 staff have documented a 20% reduction in average inpatient length of stay for ventilator-dependent patients, a 36% reduction in readmissions during the first month after discharge, a 26% reduction in readmissions during the first year after initial discharge, a 55% reduction in overall rehospitalizations, and an 11% reduction in emergency department visits. The calculated savings total for 2008 to 2010 is >$6 million. To continue this program, care coordination is necessary to support these children in the community. Also, residents, primary care physicians, and parents need more education about the patient’s care.

To address issues of access to subspecialists across North Carolina, CHACC is developing concise guidelines to aid primary care physicians in the care of children with common pediatric conditions often referred prematurely or unnecessarily to pediatric subspecialists. CHACC guidelines are developed in joint day-long work groups of pediatric subspecialists from North Carolina academic medical centers and community primary care physicians. The work group reviews evidence-based data, published guidelines, and, where conclusive data are not available, consensus of subspecialists and primary care physicians on guideline content. A subgroup writes a draft guideline, sharing it for review with subspecialists and generalists across the state. The final guideline is published on the CCNC Web site (https://www.communitycarenc.org/emerging-initiatives/child-health-accountable-care-collaborative/chacc-gi/). Guidelines include consensus recommendations for appropriate primary care clinical evaluation, including laboratory, imaging, management guidance, “red flag” guidelines for immediate referral, and patient and family educational material. Final guidelines include endorsement from the subspecialty groups at all 5 North Carolina academic medical centers. The CHACC steering committee works with the North Carolina chapter of the American Academy of Pediatrics and the CCNC networks across the state to educate primary care health professionals about the guidelines and to encourage their use. Guidelines for constipation, gastroesophageal reflux, and chronic abdominal pain are available, and a guideline for headaches is in draft review.

Informal feedback from primary care providers describes the guidelines as easy to download in a busy primary care practice and useful for patient care and family education. It is expected that this tool will aid in convincing families and patients to continue care in the primary care setting unless patients manifest “red flag” symptoms or meet referral guidelines. More formal evaluation of the impact of these guidelines on subspecialty access is under way.

CHACC appears to create a unique, care management–based, statewide engagement of pediatric subspecialists and general pediatricians and primary care providers for developing comanagement protocols for children with complex conditions and promoting coordinated, efficient, high-quality, and cost-effective care. As medical providers in North
Carolina engage in payment reform transition, including risk-based contracting, CHACC provides a platform to evaluate high-cost medical care for children. We anticipate that the cost savings from CHACC will be useful in justifying continuation of the program after completion of the grant-funded work and will be a stepping stone to value-based care for children in North Carolina Medicaid and adults with high-cost chronic illness moving between levels of care.

Our work leads us to call for more development of tools for predictive analysis and risk adjustment for medically complex children, and we are pleased to see others working in this area.\(^6\) More work is needed in subspecialty referral management using tools such as the CHACC guidelines. We believe the medically complex child and the structure of the health care delivery system for these children reinforces the old saying, “Children are not just little adults.”\(^7\)

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REFERENCES

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