

Community Care of North Carolina and the Medical Home Approach to Chronic Kidney Disease

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While the prevalence of end-stage kidney disease (ESKD) has more than tripled in North Carolina over the past 20 years,¹ the number of Medicaid recipients with ESKD has grown to over 10 000. According to the NC Division of Medical Assistance Quality, Evaluation, and Health Outcomes Unit, Medicaid spending for ESKD patients exceeded \$340 million in SFY 2007 (written communication, June 2008).^a

Too often, kidney disease progresses undetected or poorly managed for years before the onset of kidney failure. The consequent pattern of accessing care for late-stage symptoms through hospital emergency rooms—with urgent need for kidney replacement therapy—sets the stage for long hospital stays and costly medical complications. Such scenarios are terrifying for patients and families, frustrating for healthcare providers, and of significant cost burden to Medicaid.

A patient-centered response to the escalation of kidney disease in North Carolina requires an upstream focus on prevention and risk factor management. Primary care, as the principal point of contact for most individuals into the health care system, must be central to this effort. From the patient's perspective, the primary care practice should be a "medical home," where one is assured of reliable access to preventive care, chronic disease management, education, support, and advocacy in the often complex navigation of the health care system. Primary care providers are best positioned to identify individuals at risk for chronic kidney disease (CKD), recognize CKD in its early stages, initiate appropriate therapy, manage

comorbid risk factors, monitor disease progression, and coordinate comprehensive team-based care according to individual patient need. Incumbent upon Medicaid and all purchasers of health care is the need to identify and implement effective mechanisms of support for the medical home to facilitate optimal care for CKD patients and at-risk populations.

Community Care of North Carolina

The Community Care of North Carolina (CCNC) program was established in 1998 to help North Carolina proactively face the perpetual challenge of providing cost-efficient, high-quality care to its Medicaid population by assuring recipient access to

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community-based primary care, improving care coordination, and promoting evidence-based best practices.^{2,3} Over the past decade, CCNC has grown into a robust system of statewide community health networks, organized and operated by local physicians, hospitals, health departments, and departments of

a Estimates include pre-dialysis end-stage kidney disease, dialysis, and kidney transplant patients. Medicare costs are not included.

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social services. These private, not-for-profit provider networks are establishing the local systems necessary to achieve long-term quality, cost, access, and utilization objectives in the management of care for Medicaid patients. Currently, 14 networks with more than 3000 participating primary care physicians are working together to improve health outcomes for approximately 786 000 Medicaid enrollees.

CCNC is an enhanced primary care case management model in which participating practices receive \$2.50 per member per month to assure access to a medical home and to support quality improvement activities. Regional networks receive \$3 per member per month to support local care coordination and key disease management/population management initiatives. The CCNC model seeks to transform Medicaid operations from a regulatory process to a health management function, with careful balance of cost containment with quality improvement efforts. Decision making is driven by data and outcomes, and activities are designed to engage physicians, hospitals, and service providers in collaborative response to cost or quality issues.

Current Initiatives

Statewide CCNC programs include asthma, diabetes, and heart failure disease management; emergency department utilization/medical home; pharmacy management and prescribing initiatives; and care management of high-cost/high-risk patients. Pilot projects are underway for mental health co-location, chronic obstructive pulmonary disease (COPD), chronic pain management, and childhood obesity, among others.

Of particular relevance to chronic kidney disease is the CCNC Diabetes Quality Improvement Initiative. Diabetes is a leading cause of heart disease, stroke, blindness, and death and is the number one cause of kidney failure requiring dialysis in North Carolina. The CCNC approach to diabetes quality improvement emphasizes evidence-based process improvement for delivery of comprehensive diabetes care in the medical home as well as patient education and self-management support. Program-wide, CCNC has exceeded thresholds established by the National Committee for Quality Assurance (NCQA) Diabetes Physician Recognition Program for 5 out of 7 diabetes quality of care measures including glycemic control, blood pressure control, and cholesterol control. Based on chart audits of over 10 000 people with diabetes enrolled in CCNC, over 90% are attending continued care visits with their primary care provider; over 70% are up-to-date with lipid tests, foot exams, and A1C testing; and the average A1C value is 7.7%.

More recently, with support from the Kate B. Reynolds Charitable Trust and the North Carolina Foundation for Advancement of Health Programs, CCNC has launched a pilot initiative targeting Medicaid enrollees with hypertension. This initiative has 2 related goals: to promote global cardiovascular risk screening and aggressive risk factor management in the

medical home, and to engage patients in better understanding of cardiovascular risk, self-management, and medication adherence. The overlap of risk factors for cardiovascular disease and kidney disease, and kidney disease as an independent risk factor for cardiovascular disease, will be emphasized within this initiative.

Pilots known as "Chronic Care," targeting Medicaid recipients with disability, are underway in 12 CCNC networks. After reports of cost savings achieved through CCNC for Medicaid children and families were estimated at \$124 million in SFY 2004 (Mercer Government Human Services Consulting, personal communication, March 2005) the North Carolina Legislature called upon CCNC to expand activities to more fully address the needs of elderly and disabled enrollees. The complex array of physical and mental health comorbidities, and the longterm care needs of this population, demand new models of comprehensive care management, new models for advancing quality improvement in the medical home, and broader community coalitions of providers and institutions involved in the care of the patient.⁴ Early experience from these pilot efforts has made clear that single disease-focused initiatives are not sufficient for this population. Kidney disease (like diabetes, heart failure, lung disease, depression, or any other condition) rarely exists in isolation, and must be approached in the full context of the care needs of the individual.

Shining the Spotlight on CKD

Risk factors for chronic kidney disease are highly prevalent among Medicaid recipients. Over 200 000 Medicaid-enrolled adults (including 70 000 CCNC enrollees) have hypertension; over one-third of these also have diabetes. Among elderly or disabled CCNC enrollees, 1 in 5 has diabetes, and the prevalence of hypertension nears 40%. CCNC has an important opportunity to reach tens of thousands of high-risk North Carolinians before the onset of end-stage kidney disease.

With the impetus of the North Carolina Institute of Medicine (NC IOM) Task Force on Chronic Kidney Disease over the past year, CCNC and the North Carolina Division of Medical Assistance have begun to identify gaps in the detection and management of CKD for North Carolina Medicaid recipients. Our findings are startling, yet point to specific opportunities to improve the quality of CKD care:

- Among adult Medicaid recipients with hypertension managed in the primary care setting, over one-third have a calculated estimated glomerular filtration rate (eGFR) < 60, which signifies stage 3 CKD or worse. Only 46% of these CKD patients have been prescribed an ACE Inhibitor (ACE) or Angiotensin Receptor Blocker (ARB), and only 8% have their blood pressure controlled to the recommended level of below 130/80. It is probable that CKD is largely unrecognized in this population:

well over half of these patients have a serum creatinine near the normal range (≤ 1.5 mg/dL).^{b,5}

- Among Medicaid recipients with both hypertension and diabetes, only 54% are prescribed an ACE or ARB, and only 27% have their blood pressure controlled to the recommended level of below 130/80.^{b,5}
- Approximately one-quarter of CCNC enrollees with diabetes have not had recommended nephropathy management. These patients have not been screened for microalbuminuria in the past year *and* are not currently taking an ACE or ARB.^c

Promoting Best Care for Early Kidney Disease

These gaps in quality of care related to early CKD detection and management demand attention. CCNC networks are well-positioned to work with primary care practices across the state to both improve care and reduce costs related to CKD. Building upon existing infrastructure, ongoing initiatives, demonstrated high achievements in diabetes care management, and the recommendations of the NC IOM CKD Task Force, local networks could consider a variety of strategies:

- Primary care provider education about evidence-based CKD management, including screening criteria and therapeutic recommendations by stage. Emphasis should include screening for reduced eGFR and urinary protein excretion in patients at risk; the preferential use of ACE inhibitors or ARBs for people with diabetes with hypertension or microalbuminuria and for most patients with eGFR <60 ; and the aggressive management of blood pressure to target levels $<130/80$ for people with diabetes and patients with eGFR <60 .
- Practice education and assistance to assure more widespread detection of early CKD by arranging for automatic eGFR reporting from referral laboratories when creatinine is ordered.
- Support of practice system redesign to incorporate point-of-care reminders into chart flowsheets, registry systems, or electronic health records.
- Chart audits and performance feedback on CKD-related quality of care measures.
- CCNC case manager education about CKD to better address kidney-related issues with patients at risk, and to better facilitate coordinated care between consulting nephrologists and the medical home.
- Use of a prescription drug fill database to identify patients with poor adherence patterns to kidney-protective medication for targeted self-management support.
- Monitoring of hospital, practice, or referral laboratory data to identify enrolled patients with declining eGFR, for targeted educational outreach and care coordination.

Aligning Incentives for Better Management of Advanced Kidney Disease

Alignment of financial incentives is key to the implementation and sustainability of initiatives such as those outlined above. Among Medicaid recipients with end-stage kidney disease (with ongoing or imminent need for kidney replacement therapy), only 17% are enrolled in the CCNC program, and over two-thirds are also covered by Medicare. For these “dually eligible” patients, improvements in the quality of preventive and outpatient care may be expected to incur savings through reduced hospital utilization. Under typical financing arrangements, savings accomplished through CCNC efforts may largely accrue to the federal Medicare program rather than the state Medicaid program. North Carolina Community Care Networks, Inc. is currently seeking a federal waiver to allow for a demonstration of how the CCNC managed care model can achieve cost savings in this higher risk population, such that shared savings could be reinvested into community/network efforts and the medical home. If approved, such a waiver may allow involved networks to explore active enrollment and more intensive care management of advanced CKD patients. Future focus areas may then include patient and family education about kidney replacement therapy options, improved systems for care coordination between nephrologists, primary care and other specialty providers, and assurance of early vascular access for kidney replacement therapy.

We must also recognize that the many uninsured North Carolinians at risk of kidney disease should be the concern of Medicaid and Medicare programs now. It is estimated, for example, that over 200 000 hypertensive adults in North Carolina lack health insurance. Some of those individuals will not have access to health care until they become eligible for Medicaid and/or Medicare on the basis of end-stage kidney disease or other late disabling complications of uncontrolled blood pressure. A number of CCNC networks have expanded their infrastructure to include care management of uninsured individuals in their regions, and to help assure access to a medical home for chronic and preventive care and access to specialty care when needed. In a health care system where advanced age or disability are prerequisites for publicly financed health care coverage, the sustainability and spread of these programs will require proactive leadership and greater resource commitments.

Change is Local

Community Care of North Carolina is a unique approach to Medicaid managed care because it is directed by the physicians who care for the patients. CCNC works at the local level, and networks can only be as strong as their participating providers and community partners. Expanding network activities to focus attention on CKD management, deploying any of the

b Based on a 2006 chart review of 3793 adult North Carolina Medicaid enrollees with hypertension managed in the primary care setting. Patients receiving dialysis were excluded.

c Based on Medicaid claims review of 6455 non-dual CCNC-enrollees with diabetes, April 2008.

strategies suggested above, will require a commitment of resources. Network success in this area will rely upon local champions and cooperation between hospitals, specialists,

laboratories, ancillary services, and the primary care provider in the medical home. Contact information for local CCNC networks can be found at www.communitycarenc.com. **NCMJ**

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