

## Disease Management in Primary Care: Rapid Cycle Quality Improvement of Asthma Care

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**W**hat can we learn from the Sandhills Pediatrics' asthma care experience?<sup>1</sup>

The first lesson is that primary care-based disease management programs can dramatically improve outcomes of care. Not surprisingly, an organized, explicitly designed approach to caring for special populations leads to improved outcomes of care. Sandhills Pediatrics successfully *carved into* their practice "a systematic, population-based approach to identify persons at risk, intervene with specific programs of care, and measure clinical and other outcomes."<sup>2</sup>

*"The Sandhills experience can teach the rest of us the key ingredients and how to organize them to improve population outcomes in primary care."*

This is an important lesson because in the mid to late 1990s many in the managed care community lost faith in practicing physicians doing what Sandhills Pediatrics has done. Managed care executives turned to *carve out* solutions from emerging disease management vendors. These vendors developed programs that bypassed the traditional healthcare delivery system and used externally based case managers or other resources to reduce costs and improve outcomes related to chronic diseases.<sup>3</sup>

It's clear that a specifically designed disease management program can improve outcomes for those with chronic disease. But how do we carve these successful programs into existing practices? Viewed from the perspective of operations research, Sandhills Pediatrics becomes a laboratory with very important lessons for the rest of us. The Sandhills experience can teach the

rest of us the key ingredients and how to organize them to improve population outcomes in primary care.

### Leadership

The first and arguably most important ingredient is leadership. Leadership must be persistent and able to defuse nearly certain initial resistance to build an effective team of colleagues and office staff. The image to get in your mind here is that of the Energizer Bunny®—leadership that keeps going and going and going.

### Organizational Support

A second crucial ingredient for successful disease management is organizational support. Notice that Sandhills has been involved in several improvement initiatives around preventive care, access, oral rehydration, and attention deficit disorder. Clearly this is an 'early adopter' medical practice! In each of these efforts, the practice had the support of a larger organization helping them improve their practice. Practices need a guide, a support network, and a larger context in which to view their work. In this case, Dr. Boals had the support of the AccessCare network of practices. AccessCare is a non-profit organization committed to improving quality of care and reducing costs of care for state Medicaid beneficiaries.<sup>4</sup> Other third-party payers might take notice of this innovative approach to working with practices to improve quality and reduce costs of care.

### Measuring Practice Performance

A third vital ingredient to build a successful disease management program is measurement of practice performance. As with Sandhills pediatrics, this can involve time-consuming chart reviews. In their case, an AccessCare staff member did the chart reviews. Identifying a non-clinician member of the staff who can be trained to do the chart reviews on an ongoing basis may be a way for practices to achieve this.

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Hand-in-hand with a commitment to measure practice performance is the courage to face the results squarely. Many clinicians feel challenged and threatened when they begin to see this kind of data and will question the measurement strategy and the data quality rather than begin to look for ways to improve. A measurement plan that is simple and transparent can quiet the critics and refocus attention on performance improvement.

## Team Approach

A fourth necessary ingredient to building a successful practice-based disease management program is a team approach to care. I don't think it is an accident that Drs. Wroth and Boals described significant improvement after the nurses in his practice began to participate in asthma care by 'automatically' doing peak flow measurements and writing action plans for patients with a diagnosis of asthma. This expansion of the nursing role within a practice is a common theme of successful disease management programs. Prerequisites to this include a practice culture that is open to learning new skills and applying those skills in expanded roles within the practice.

## Focus on Process

A final ingredient to building successful carve-in disease management programs is a focus on the process of care. What happens when a patient with asthma visits the practice? Who is going to do what? Where? When? With what resources?

These ingredients: leadership, organizational support, measurement of practice performance, a team approach to care, and a

focus on the process of care have been identified as common elements of successful clinical microsystems in studies done across the United States.<sup>5</sup> How should these ingredients be combined? The recipe for successful disease management in primary care practices calls for the proper mixing of these ingredients over time.

Rapid cycle quality improvement combines these ingredients in repeated cycles of planning, doing, studying, and acting (PDSA) cycles.<sup>6</sup> *Planning* includes initial problem identification, probable causes of the problem, potential solutions and data needed to evaluate them, and improvement goals. *Doing* involves implementing a solution and collecting the data needed to evaluate the impact of the solution. *Studying* requires further data analysis to develop conclusions—what happened when we made that change? *Action* involves either further study or action that comes out of the data analysis. Rapid cycle quality improvement leads back to a better understanding of the problem and more planning.<sup>7</sup>

This cyclical process of improvement was well-illustrated in commentary by Drs. Wroth and Boals. Their first cycle of improvement involved physician and nurse education and the provision of pre-printed action plans and patient education materials. They began planning for a second cycle of improvement by increasing education, making peak flows and filling out action plans 'automatic' within the practice, and reporting individual clinician outcomes. These steps led to a dramatic improvement in outcomes. A third cycle of improvement led them to create an evening asthma clinic for 'well-asthma' visits once a month.

Unfortunately, Sandhills Pediatrics and its remarkable improvements in asthma care remain the exception rather than the norm. The task for many of us is to emulate their efforts in our own practices across the state. **NCMedJ**

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