



Reinvigorating Pediatric Care in an Academic Family Medicine Practice

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BACKGROUND AND OBJECTIVES: Primary care access is critical for all populations, and family physicians remain a vital link to pediatric care, especially for rural/underserved areas and adolescents. Pediatric visits to family physicians have declined nationally, a trend also noted at the University of North Carolina (UNC) Family Medicine Center (FMC). Academic FMCs are challenged with maintaining their pediatric population in a competitive environment and providing excellent pediatric training to prepare residents to care for children. We investigated potential factors impacting pediatric visits with a goal of reversing this trend. We developed a 360-degree approach to examine and reinvigorate pediatric care and training in our practice.

METHODS: To determine which aspects of our practice made pediatric care challenging, we conducted focus groups with parents of former and current FMC pediatric practices. We used billing data to assess pediatric patient volume and performed chart audits to examine preventive health visits, immunizations, and developmental screening. We anonymously contacted local family medicine and pediatric practices to compare services offered in their practice versus ours. Resident in-training exam scores and graduate surveys were reviewed to assess our pediatric training.

RESULTS: Based on our evaluation, we identified and implemented improvements in the areas of clinical quality interventions, provider/education competency, and community marketing/relationships.

CONCLUSIONS: A longitudinal evaluation and quality improvement initiative positively impacted our pediatric practice and training. The 360-degree approach of quality improvement may be useful for other academic family practices that are challenged with pediatric volume.

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Family physicians have a long tradition of providing care for all members of the family throughout life, ranging from pediatric to geriatric care. Yet the proportion of pediatric visits provided by family physicians in the United States has significantly decreased in the recent past.¹⁻¹² While the greatest

contributing factor to this trend is likely a two-fold increase in the number of pediatricians over the past 25 years, there have been significant declines in the percent of family physicians that include inpatient obstetrics or prenatal care in their practices.¹³⁻¹⁴ There has also been a shift in residency education and

outpatient practices toward chronic disease management and geriatric care.

This decline in pediatric visits is balanced by increased dependence on family physicians in rural and underserved areas and an increased proportion of adolescents who receive health care from family physicians (26% versus 24% from pediatricians). National trends of declining pediatric visits are reflected in many residency practices, potentially impacting clinician confidence as well as the quality of care provided to children in these practices. This is a critical issue, especially for programs such as the University of North Carolina (UNC)—a public institution with a declared mandate to train full-scope family physicians to serve North Carolina. In addition, new ACGME family medicine residency program requirements state that 10% of Family Medicine Center (FMC) resident-patient encounters must be with patients younger than 10 years of age. The UNC FMC is a large, academic practice with over 40 clinicians (including 28 residents) and 50,000 annual patient visits.

Methods

We conducted an analysis through patient billing data that verified pediatric visits by any provider had

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decreased from 15% to 11% from 2000–2005. During this time, resident physician pediatric visits declined from 18% of total visits to 11%. In 2005, we began to investigate potential factors impacting pediatric volume with a goal of reversing this trend. The decline in visits was most pronounced in children between 1–4 years despite an overall increase in the number of infant visits. Most pediatric visits were with resident physicians, and approximately 70% were well-child visits. Approximately 4% of resident visits were with children less than 10 years old.

To understand factors that may influence the decline of pediatric visits, we collected data to examine prenatal volume trends, infant retention, patient experience, quality indicators, local competition, resident feedback, and in-training performance.

To examine whether prenatal volume is linked to infant visits in our practice, we used billing data to graph prenatal patient volume 1997–2005 and compared this with pediatric visit volume broken down by age. We then used billing data to see how many of our prenatal patients' infants came to our practice at least once and how many remained over the following 18 months.

Quality indicators examined included immunization rates and consistent use of a validated developmental screening instrument in well-child visits. We performed a chart audit of children who turned 2 years of age in a 3-month period in 2005 (n=40) to document how many received CDC-recommended immunizations in the first 2 years of life. We reviewed charts of children 6 months to 5 years of age who attended a preventive visit from December 2008 to August 2009 for documentation of a validated developmental screening instrument used in the visit.

To examine patient experience of our pediatric services, an independent qualitative researcher, with IRB approval, facilitated 1-hour focus group discussions with two sets

of parents: those who were actively receiving pediatric care for their infant at our FMC and those who previously received pediatric services but left the practice in the previous 2 years. Participants were also asked to complete a written survey. In addition, a group of volunteer students served as “secret shoppers.” They made phone calls to local family medicine and pediatric practices to compare services offered, hours of operation, and friendliness of front desk staff.

To assess our pediatric residency training, we examined results of the “Care of Children and Adolescents” category of family medicine in-training exams from 2000–2005. We also reviewed our 1-year and 5-year graduate follow-up surveys for comments related to pediatrics training. Finally, we surveyed current residents about their confidence in pediatric care. The focus group component of this evaluation received approval from the UNC Institutional Review Board. All other activities were deemed not research and therefore did not require IRB oversight.

Results

We determined that while 80% of the infants delivered on our service subsequently came to the FMC for at least one visit, only 37% remained in the practice at 18 months of age. Of those who did not continue, the average age of the last visit was 4–6 months. Our examination of quality indicators found that immunization rates were over 90%. Thirty-five percent of appropriate well-child visits had documentation of a validated developmental screening. Table 1 lists the pros and cons conveyed by the focus group participants who either remained in or left the practice. Our “secret shopper” calls revealed nine additional family medicine and pediatric practices within 15 miles of our FMC providing care to children. Of these, 90% had a nurse advice line, 70% had weekend hours, and 40% had walk-in services.

Residents scored at the national average on the “Care of Children

and Adolescents” subsection of the in-training exam; however, survey results demonstrated that graduates felt they needed more training in pediatrics. This corresponded with the survey of current residents that showed 70% felt less than confident in their care of pediatric patients and wanted additional pediatrics training.

Discussion

We used the accumulated information to guide our efforts undertaking the 360-degree quality improvement approach outlined in Figure 1. We initiated a dedicated cellphone-based advice line, carried by one of our nurse practitioners and available to parents of pediatric patients during FMC office hours. We also advertised the UNC system afterhours nursing support line. We created a child-friendly atmosphere in the waiting and exam rooms by adding toys and books, painting colorful wall murals, and instituted Reach Out and Read, a national evidence-based literacy promotion program.¹⁵ Drawing on the success of our prenatal group care, we developed a model of well-child group visits called WellBabies for children birth to 1 year of age.¹⁶ We expanded our in-house lactation consultant services and promoted ourselves as a breastfeeding-friendly practice.

Although our immunization rates were high, concerns voiced in the focus groups pointed to a need to improve the perceived quality and confidence in our providers. To streamline this, we created a physician order form with clear decision support and participated on a UNC hospital-wide committee to integrate immunizations into our electronic health record with “flags” to alert clinicians of scheduled or missed immunizations. In 2008 we created a flow diagram for flu shots, provided nursing in-service training, and began outreach to parents.

We improved our developmental screening processes by implementing the Ages and Stages Questionnaire, which is a validated instrument

Table 1: Pros and Cons of Pediatric Care at University of North Carolina Family Medicine Center (FMC) From Pilot Focus Groups

	Remained at FMC	Left FMC
Pros of pediatric care at FMC	Staff are friendly, willing to listen, respectful	<ul style="list-style-type: none"> • The philosophy of family medicine • Good relationships with specific providers • Lactation consultant services
Cons of pediatric care at FMC	Lack of a nurse phone line. No direct line to speak with a provider	<ul style="list-style-type: none"> • Physical environment not appropriate for children • Navigating the front desk procedure is challenging • No direct line to speak with a provider • Lack of continuity of care • Question of resident pediatric skills

that engages parents and providers in developmental assessment. After an 8-month training period, the rate of screening increased to 90% of all children between 6 months and 5 years of age at their respective well-child visits.

Although many women seek out our maternity care services, they often return to community pediatricians and other practices following childbirth. To respond to this potential source of new pediatric patients, we created brochures for FMC pediatric care and WellBabies group care and added discussion of pediatric care to the checklist of required physician counseling during second-trimester prenatal visits. We provided a letter to all pediatric parents highlighting our services, including our provision of hospital care for all our newborns and children.

We also marketed through our “birth community” by hosting local events (including documentary screenings of “The Business of Being Born” and “All Our Babies”). We added free community childbirth education and newborn care classes at the FMC. We directly marketed our services to residents of married-student housing (located near our facility) and new UNC faculty members, emphasizing our campus location for ease of accessibility.

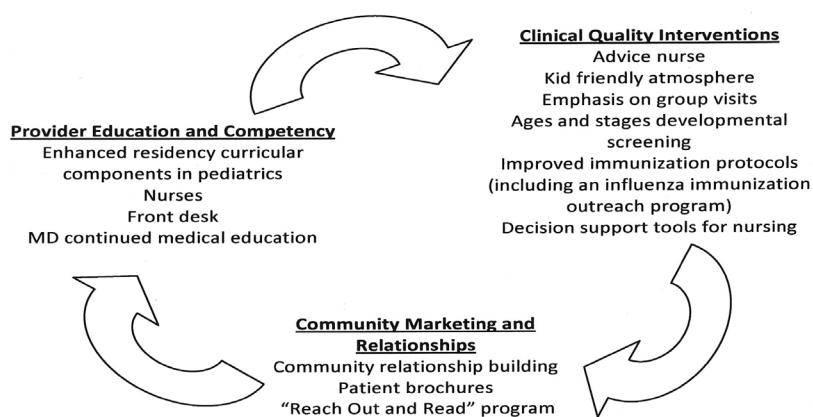
We enhanced our residency curriculum to reflect the AAFP-recommended guidelines for family medicine residents. Critical components include case-based learning

and “competency” workshops, education around the integration of growth charts, evidence-based preventive screening, immunizations, and parental counseling techniques. We developed a curriculum for group visits that promotes faculty role modeling of parental counseling and direct observation and feedback for residents. This is important in a practice with a large percentage of young clinicians who may not have personal experience in parenting and need to be confident and flexible in responding to parents’ questions and concerns.

Conclusions

This longitudinal evaluation and quality improvement initiative directed at reinvigorating pediatric care has provided an important

Figure 1: 360-Degree Approach to Improving Care of the University of North Carolina Family Medicine Center



opportunity for our practice. Through this endeavor we were able to increase our resident pediatrics visits from a nadir of 6.3% (2009–2010) to 8.8% (2011–2012), with the goal of reaching over 10% to meet the new ACGME requirements. The 360-degree quality improvement approach used in this initiative may be useful to consider for other academic family medicine practices challenged with pediatric volume. As we focus on patient-centered medical homes and NCQA recognition within our practices, we must continue to regard the care of children as a priority for family physicians.

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