the innovative work by individual family physicians such as Jeff Brenner from Camden, New Jersey, who has demonstrated how health care costs can be cut by finding community "hot spots" where emergency departments are over-utilized.[9] We commend the Association of American Medical Colleges (AAMC) for publishing their report on how academic medical centers of the future must be system-based to survive.[9] In a recently published report, the AAMC describes 4 options for academic medical centers to move toward a system identity, from forming a new system, to partnering, to merging, or to facing the reality of shrinking in isolation.[10] Within ADFM, we are tracking how departments of family medicine (DFMs) are leading health care transformation within their academic health centers. Many of our DFMs are actively engaged in moving to team-based care, improving delivery of preventive services, and promoting more appropriate use of consultations and referrals.[11] We will continue to collaborate with others who share the goal of using population health management approaches to improve affordable health care for the nation.

ADFM Executive Committee: Paul James, MD; Anton Kuzel, MD; Barbara Thompson, MD; Ardis Davis, MSW; and Kevin Grumbach, MD

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From the Association of Family Medicine Residency Directors

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PROGRAM DIRECTOR TURNOVER

One of the most widely used Association of Family Medicine Residency Directors (AFMRD) member benefits is the e-mail discussion list, commonly referred to as the Listserv. Here is where more than 600 program directors and associate program directors have the opportunity to share information and support. It's also where announcements that a program director is leaving are commonly posted, usually accompanied by the introduction of a new program director. Less frequent but no less important are announcements about family medicine residency programs closing.

The announcements of program director changes may create the perception that program director turnover is increasing, yet recent data shows otherwise. The program director turnover rate has been stable for the past 12 years, with 8 of the past 12 years in the 12% to 14% range. The lowest turnover was just below 12% in 2008-2009; the highest percentage was 17.09% in 2004-2005. The percentages are reported by the Accreditation Council for Graduate Medical Education based upon the number of new program directors, including interim program directors. Thus, some programs have 2 program director changes even though only 1 program changed. The percentage turnover would be even smaller if it were counted by program changes, not program director changes.

Even the absolute number of program director changes has been remarkably stable. The number of new program directors in the past 12 years has ranged from 84 in 2002-2003 to a low of 54 in 2008-2009, while the total number of family medicine programs has ranged from a high of 497 in 2001-2002 to a low of 450 in 2009-2010.

The number of new and withdrawn programs affects the number of program directors. The largest number of withdrawn programs since 2002 occurred that year, with no new programs added in 2002. Since then, the number of new programs has been generally growing while the number of withdrawn programs has been generally decreasing. Since 2009, the number of new programs has outweighed the number of withdrawn programs. In 2012-2013 and 2013-2014, the rate of increase of new programs nearly doubled, to 13 and 14 new programs respectively, above the previous highest rate of 7 new

programs in 2007-2008. Likewise, the number of resident positions has been generally increasing since 2002 after a net loss of 328 positions in 2002. In the past 2 years, the net gain of resident positions has nearly tripled the previous highest net gain. The previous highest net gain was 57 positions in 2010-2011, with 176 and 186 net positions in 2012-2013 and 2013-2014 respectively. Even with these new programs, the percentage of new program directors has remained stable, which could indicate even less program director turnover in the past 2 years.

For the past 3 years, the AFMRD has queried the attendees of its annual meeting, representing most family medicine residencies, through an audience response system. Although not a scientific survey, the results correlate with a stable program director turnover rate. Nine percent to 10% of respondents indicated they plan to remain as program director for 1 year or less, 48% to 52% indicated they plan to remain as program director for 2 to 5 years, and 39% to 42% plan to remain as program director for more than 5 years. Forty-eight percent responded they have held the position for more than 5 years.

Past program director turnover rate was much higher. A 2008 *Annals of Family Medicine* article highlights that when the National Institute for Program Director Development (NIPDD) fellowship began in 1994 the annual turnover rate of program directors was 33%; by 2007 the turnover rate was down to 13%.[1]

The stability of family medicine program director turnover, while the number of family medicine residency programs is increasing, bodes well for providing continued educational leadership as medicine rapidly changes. Nevertheless, it remains unclear whether a 12% to 14% turnover rate is significant. We know program directors leave the position for a variety of reasons—ranging from burnout from increasing regulations and administrative pressures to being tapped for other high-level administrative positions.

The AFMRD remains vigilant in supporting program directors. In addition to NIPDD, the AFMRD has a goal to provide advanced training opportunities for program directors to further develop skills to address new requirements, increased administrative burdens, and higher level administrative functions.

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NORTH AMERICAN PRIMARY CARE RESEARCH GROUP

From the North American Primary Care Research Group

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HOW PRIMARY CARE PRODUCES BETTER OUTCOMES – A LOGIC MODEL

Roger Lienke, MD, a pediatrician-turned-family physician, who died at the age of 91 last year, founded one of the first 4 family medicine residency training programs in the United States at the University of Oklahoma. (The other 3 programs were established by Lynn Carmichael in Miami, Florida, Gene Farley in Rochester, New York, and Gayle Stephens in Wichita, Kansas.)

A conversation with Roger in 2011 about the origins of our discipline and its subsequent evolution led to a 2-year quest to create a logic model explaining how and why more and better primary care produces better health outcomes at lower cost.

The work was driven by our concern that primary care was still not well understood by many of those now engaged in its transformation. It was our shared bias that primary care is qualitatively different from other medical disciplines, being defined by a set of processes or attributes rather than by a set of clinical problems, organ systems, or demographic characteristics of patients.

We began by creating a list of desired outcomes based upon a review of the literature. Based upon that list, we identified a set of intermediate outcomes again from our systematic literature review. Finally, we developed a list of attributes derived from the Institute of Medicine's 1996 definition of primary care and attempted to identify, based upon the available literature and our own clinical experience, a set of possible mechanisms through which the attributes might act to produce better intermediate outcomes. The result is a long, extensively referenced manuscript that we agreed to post on the NAPCRG website as a living document. A medical student, Brenden Drew, created an accompanying Prezi, also posted, which contains definitions, constructs, and published measures for most of the components of the model. Our hope was that this material could be useful to teachers, researchers, and policy makers. We also hoped that others might want to get involved in its ongoing development. It has not been published elsewhere.

I have used the logic model for teaching 3rd-year medical students about primary care and when advising researchers about what to assess when measuring the impact of ongoing primary care innovations. It was