BACKGROUND: The percentage of US seniors choosing primary care careers remains well below the nation’s future workforce needs. Data in this article are collected from the 2012 National Resident Matching Program (NRMP) Main Residency Match and the 2012 American Academy of Family Physicians (AAFP) Medical Education Residency Census, which had a response rate of 100%. The census verified residents who entered training July 2012 from all medical schools. The information provided includes the number of applicants to graduate medical education programs for the 2012–2013 academic year, specialty choice, and trends in specialty selection. Compared with the 2011 Match, family medicine residency programs filled 35 more positions (with 18 more US seniors) through the NRMP in 2012. In other primary care fields, 31 more primary care internal medicine positions (20 more US seniors), two fewer positions in pediatrics-primary care (one less US senior), and 18 fewer positions in internal medicine-pediatrics programs (33 fewer US seniors) filled. The 2012 NRMP results indicate a small increase in medical students choosing primary care careers for the third year in a row; however, students continue to show an overall preference for subspecialty careers.

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A crisis in access to first-contact, comprehensive, and coordinated medical care is occurring in the United States. Family medicine, the specialty that distributes equitably throughout America’s communities and along with the population, is key to solving this access crisis. Promoting student interest in family medicine is a top strategic priority for the American Academy of Family Physicians (AAFP), and its Comprehensive Student Interest Initiative includes numerous projects to increase student awareness of and interest in family medicine.2,3 Approximately one fourth of all US allopathic medical students (20,600) are members of the AAFP, although less than 9% match into family medicine residencies.

The number of US seniors choosing family medicine has increased annually since 2002. However, US student interest in family medicine careers remains a concern.4 Student perceptions of the demands, rewards, and prestige of primary care specialties; market changes; lifestyle priorities; and the influence of medical school faculty continue to influence career choice. With 22,240 open positions, the 2012 National Resident Matching Program (NRMP) offered the greatest number of residency positions in its history: 20,940 filled, 14,359 by US seniors. The AAFP examines the US senior Match rates in family medicine and other primary care disciplines as a forecast of the future US workforce.

Methods
The AAFP Medical Education Division annually acquires and analyzes the NRMP data for the number and percentages of US medical students and international graduates entering family medicine residencies and other specialties. The AAFP Medical Education Division Residency Census also queried family medicine residency program directors through an online survey for composition of residents entering July 2012. Repeated reminders and telephone calls resulted in 100% program director participation. This analysis was deemed exempt from IRB review.

Results
Family Medicine March Fill Rate
Family medicine residency programs offered 2,764 first-year positions through the 2012 NRMP, an increase of 34 from 2011. On Match Day 2012, 2,611 of these positions were filled through the Match, an increase of 35 from 2011 for a fill rate of 94.5%, compared with 94.4% in 2011 (Figure 1).5,6 After a nadir of 78.8% in 2004, the fill percentage has slowly
increased annually. A total of 18 more US seniors matched into family medicine residencies in 2012 than in 2011 (1,335 versus 1,317) (Figure 1). Of the successfully matching US medical school seniors graduating in 2012, 8.5% matched in family medicine, compared with 8.4% in 2011. For all US seniors (including previous years’ graduates) who participated in the 2012 NRMP, 8.1% matched in family medicine, compared with 8.0% in 2011. In addition to US allopathic seniors (48.3% of matched positions in family medicine), 1,276 other graduates matched in family medicine in 2012 (1,259 in 2011) including 325 (294 in 2011) graduates of colleges of osteopathic medicine (25.5%), 350 (363 in 2011) non-US citizens educated internationally (27.4%), 518 (540 in 2011) US citizens educated internationally (40.6%), 79 (90 in 2011) physicians who graduated from US medical schools prior to 2011 (6.2%), three (eight in 2011) “fifth pathway” students (0.2%), and one (zero in 2011) Canadian medical school graduate (0.1%). The Mountain region had the highest fill rate in family medicine (98.6%), whereas the East South Central region had the lowest fill rate in family medicine (88.7%) (Figure 2).

Comparison With Primary Care Disciplines

Overall, family medicine’s primary care colleagues offered more positions in 2012 and experienced a slight increase in positions filled in the 2012 Match. Internal medicine-primary care offered 25 more positions this year and again increased in the number of positions filled (269 in 2011 to 300 in 2012) and positions filled by US seniors (166 in 2011 to 186 in 2012). A total of 161 more internal medicine categorical positions were offered in 2012 compared to 2011 (5,226 versus 5,121), with a similar fill rate to 2011 for total positions (99.0% versus 98.9%) but a decrease in the rate of positions filled with US seniors (55.7% versus 57.4%). The number of internal medicine-preliminary positions offered (1,861 versus 1,900) and filled (1,738 versus 1,771) both decreased, with an even larger decrease in the number of positions filled with US seniors (1,427 versus 1,503). Transitional residency programs offered 11 fewer positions this year compared with 2011 (941 versus 952) with fewer positions filled overall (915 versus 919) and fewer filled with US seniors (785 versus 811). Of the internal medicine programs, only internal medicine-primary care increased positions and matched more US seniors.

All pediatric programs demonstrated a decline in matching US seniors in the 2012 Match. Pediatrics-primary care decreased its positions filled with US seniors from

**Family Medicine July Fill Rate**

Since 1987, family medicine residencies have more positions filled by July than offered through the NRMP in March. Between 1990 and 1998, family medicine residencies added 676 positions due to program expansion and newly accredited family medicine programs. Since 1998, the number of positions decreased by 563; however, with the decreased entry of US graduates to family medicine programs, an increase in the number of positions filled outside of the NRMP occurred. The “all-in” Match projected for 2013 will undoubtedly impact this dynamic. By July 2012, 99.8% of family medicine residency positions were filled (3,494 of 3,502). On July 1, 2012, 10,104 residents began training in 454 programs, an average of 22.3 per program compared to 10,022 (22.2 per program) in 2011. Currently there are 3,494 first-year residents, for an average of 7.7 per program compared with 3,443 (7.6 per program) in 2011. Osteopathic graduates selecting allopathic family medicine programs are expected to continue increasing due to growing enrollment in current and newly accredited osteopathic medical schools as well as more dually accredited family medicine residency programs (26 in 2003 to more than 113 in 2012).

In July 2012, 1,209 (34.6%) of the 3,494 first-year family medicine residents were international medical graduates (IMGs), compared to 1,228 (35.7%) of the 3,443 residents in 2011. A total of 409 (11.7%) first-year residents were non-US citizen IMGs, compared to 470 (13.7%) in 2011. A total of 800 (22.8%) were US citizen IMGs, compared to 758 (22.0%) in 2011 (Figure 3). Concern regarding difficulties for non-citizens to obtain visas in time to begin residency in July may be one of the factors contributing to the demographic change, as well as the NRMP’s new Supplemental Offer and Acceptance...
Program (SOAP), implemented for the first time in 2012.

**Discussion**

US allopathic seniors still comprise less than half of the Accreditation Council for Graduate Medical Education (ACGME)-accredited family medicine residency positions. Among all internal medicine programs in 2012, only internal medicine-primary care increased residency positions and matched more allopathic US seniors than in 2011. All pediatric residencies saw a decline in US allopathic seniors matching in 2012. Osteopathic medical school graduates now account for 25% of the non-Liaison Committee for Medical Education (LCME)-accredited medical school graduates matching into ACGME-accredited family medicine residencies.

Studies continue to identify drivers of student interest in family medicine. Collaborative efforts between medical student education faculty, Family Medicine Interest Group (FMIG) faculty advisors, residency directors, department chairs, and family medicine organizations are essential to increasing student interest. Due to stagnation in student interest in the specialty and low Match rates, the AAFP sponsored four regional Student Interest Stakeholder meetings in 2010 and 2011. The meetings explored state- and region-based collaboration among the various primary care stakeholders and documented student interest strategies. The learnings from these meetings, along with current data on student interest, are currently being synthesized into the AAFP’s new Student Interest “Influencer” Portfolio, a framework for intervention. Primary, secondary, and environmental influencers on student interest in primary care specialties were identified in six specific areas: payment, people, programs, policy, perception, and personal characteristics. Understanding primary influencers, especially those that occur before medical school and during the first 2 years, should be further explored and quantified since career intention before medical school has a positive effect on choosing family medicine as a career. Further detailed information about these influencers and the proposed intervention model are available on the AAFP’s web site at www.aafp.org/siportfolio.

**Conclusions**

In 2012, more US seniors chose family medicine through the NRMP than at any time since 2002. Despite this positive trend in family medicine, the percentage of US seniors choosing primary care careers still remains well below the nation’s needs. Projections anticipate a substantial shortfall of primary care physicians for the aging adult population because fewer internists are pursuing generalist careers; thus family physicians will be increasingly important in the provision of this care. Family physicians are recognized as crucial to containing cost and increasing quality in the US health care system. In states where more physicians are generalists, data shows higher quality medical care, lower Medicare costs, and more favorable patient outcomes. The AAFP is committed to developing programs to assist stakeholders in addressing the primary, secondary, and environmental factors that influence student interest in family medicine (payment, people, programs, policy,
perception, and personal characteristics). The AAFP also advocates for reimbursement reform to decrease the income disparity between primary and specialty physicians, promotes high-functioning patient-centered medical homes to “bend the cost curve” in health care, and more importantly, communicates to future physicians the joy and satisfaction of a career in family medicine.

Over the past 15 years, 23,394 US seniors have matched into family medicine residencies. These students are clear in their commitment to serve the nation as family physicians and become the foundation of health care now and in the future.

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