Income Ratio and Medical Student Specialty Choice: The Primary Importance of the Ratio of Mean Primary Care Physician Income to Mean Consulting Specialist Income

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United States medical student choice of careers in the primary care disciplines has waned significantly over the past 15 years. A complex array of factors influence this decline, which has had an adverse effect on the quality and cost of medical care in the United States. Recent data suggest that the ratio of primary care physician income to specialty physician income (the income ratio) may be the most important factor in specialty career choice.

The Problem
Currently, the US medical education system does not produce nearly the number of primary care physicians (PCPs) needed for a health care system that would optimize outcomes, cost, and equity or that will meet future societal needs. Investigations by the Dartmouth Institute for Health Policy and Clinical Practice and analyses by the Johns Hopkins Bloomberg School of Public Health and the Council on Graduate Medical Education (COGME) show a consistent association between a high supply of PCPs, as defined by the Institute of Medicine, and better performance for an array of health care outcomes, lower system-wide cost, and improved access to care for medically vulnerable populations. In these studies, family physicians, general internists, and general pediatricians meet the definition of primary care, and an optimally high supply of PCPs is reached when 40% to 50% of all physicians are PCPs.

From the late 1970s to 2002, the percentage of PCPs among all physicians was stable at 36%. Since 2002, this percentage has dwindled to 32%, and medical student choice of primary care careers over the past decade indicates that the percentage will decline further still. The Association of American Medical Colleges Graduation Questionnaire (AAMC GQ) provides some startling information. In 1998, 36% of all US allopathic medical student graduates indicated an intention to pursue a career in primary care. From 1998 to 2004, this percentage declined precipitously to about 20%, and for the last 8 years the percentage has hovered between 15% and 20%. A recent Robert Graham Center study of all US residency programs over a 3-year period found that only 24% of graduates became PCPs, and this percentage included those who work predominantly as hospitalists.

These trends have contributed to an ever increasing cost of care and give policy makers pause when making recommendations for the primary health care needs of a population that is universally insured and rapidly aging. Drastic interventions are needed immediately to increase the PCP supply. One of the major questions is: What are the factors that now negatively influence student choice that can be remedied?

Factors That Influence Student Career Choice
The variables that affect student choice can be categorized into four main areas: (1) medical school admission policy, (2) medical school educational environment, (3) practice environment, and (4) physician income. Several
studies are in progress that examine the effect of admissions policy and medical school environment on specialty choice. The recent work of health economist consultants for the Department of Health and Human Services (HHS) and COGME, and the experience in other English-speaking nations, provide a powerful analysis of the importance of physician payment methodology and physician income on specialty choice. It is my opinion that one measure of these economic forces, the ratio of mean PCP income to the mean income of all other physicians (the income ratio), is the most important factor in medical student specialty choice.

The Income Ratio
Health care economists Charlie Roehrig and Ani Turner of the Altarum Institute were contracted by HHS to provide COGME an analysis of medical student choice of primary care careers. Altarum analyzed data from 1985 to 2010 to compare the income ratio (using Medical Group Management Association data) to student primary career choice (using AAMC GQ data). Figure 1 is an updated version of a figure that was published in the COGME 20th report.¹ This figure shows a clear correlation between the income ratio and primary care career choice. Increases in primary care career choice immediately parallel increases in the income ratio. Primary care career choice plummeted to current low levels as the income ratio fell from 0.78 in 1985 to 0.50 in 2007. The strong historic association between income ratio and specialty choice, when combined with anticipated professional return on investment for extra years of training, suggests that an income ratio of about 0.80 will likely result in the 40% target of primary care career choice. The experiences in other countries provide validation for this information.

Canada
Virtually all PCPs in Canada are family physicians. The percentage of Canadian medical students who chose family medicine as a career was 34% in 1998, similar to the 36% primary care interest in the United States at that time. Like the United States, student interest in family medicine declined significantly in Canada to a low of 24% interest since 2004. The ministers of health and the deans of the medical schools considered this decline a national crisis and instituted policies to improve the medical school environment and increase payments to family physicians and family medicine centers. Hefty prospective care coordination payments boosted family physician income by 40% to 60%. The ratio of family medicine

Figure 1: Relative Income and US MD Preference for Primary Care by Graduation Year

Source: Altarum calculations from Association of American Medical Colleges Graduation Questionnaire and MGMA compensation data, updated from Figure 3, COGME Twentieth Report, Advancing Primary Care.
to specialty income rose to 0.83, and in recent years both family medicine and specialty income have risen substantially while the 0.83 income ratio has been maintained. The Canadian Residency Matching Service reports a steady increase in student interest in careers in family medicine since 2004. This interest hit an all-time high in 2012, when 40% of Canadian medical school graduates entered family medicine residency programs.

The United Kingdom
While Canada used care coordination payments to boost primary care incomes, the United Kingdom (UK) used another form of payment incentive, payments for quality outcomes. The UK instituted the quality payments over a long phase-in period from 1991 to 2004, and the Quality Outcomes Framework (QuOF) became fully functional in 2004. Family physicians embraced the QuOF, and the payments for quality measures were substantial, resulting in increases in family physician income of 30% to 75%. The mean family physician income rose to equal the mean specialty income in 2006 (income ratio 1.0). According to the British Medical Association Cohort Study, medical students anticipated the increase in family medicine income, and between 1996 and 2004, students’ choice of family medicine rose from 15% to 35%.

Summary
The importance of the income ratio for student choice of careers in primary care cannot be dismissed. The Altarum data and the experience in Canada and the UK all illustrate the powerful influence of the income ratio. We should also remember that a rising income ratio only occurs when payments to family medicine centers are also rising. As the income ratio rises, financial means to transform practices also rise. Transformed practices likely will have an positive environment that will attract medical students.

Action Items
Following are some suggestions that may affect the income ratio and increase student choice of primary care careers:
(1) The RBRVS Update Committee recommended that CMS make substantial across-the-board prospective care coordination payments to all NCQA certified patient-centered medical homes. Family physicians should actively endorse these recommendations to CMS.
(2) Private insurers and Medicaid should devise a similar formula for care coordination payments for younger age groups.
(3) Practice plans often use MGMA or AAMC benchmarks to set salary ranges. Use of these guidelines perpetuate a system in which primary care incomes are set at 50% to 60% of specialty incomes. Family medicine leaders should insist on the use of income tables that list primary care income by percentile at no less than 80% of specialty income by percentile.
(4) An appropriately balanced physician workforce is a measure of social accountability. Medical schools should focus their mission on social accountability, and the deans of US medical schools should insist on payment methodologies that improve outcomes and lower cost for the system.

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References