

## EDITORIAL

# The illusion of minority status

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*Submitted: 2008; Published: 17 September 2008*

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***Rural and Remote Health 8: 1036. (Online), 2008***

**Available from: <http://www.rrh.org.au>**

Studies consistently demonstrate that medical students who are different, diverse, minority, lower income, or rural have different patterns of distribution as physicians. They return to different, diverse, minority, or rural populations at increased levels, typically at approximately 2–3 times higher levels.

This effect of experiential place or life experiences shaping practice location has been studied in all of the above dimensions. Residency, medical school, and birth to admission experiences all shape practice location.

It is possible to pull out any number of examples of ‘minority’. Of course with each example, the focus is on the ‘minority’ and not all who are ‘minority’.

It is common to think in terms of ‘minority’ admissions when considering displaced Natives (First Nations peoples) or populations who capture lower percentages of total physicians when compared with their percentage of the

population. In America, the African American, rural, Hispanic, and lower income origin physicians are all ‘underrepresented’. Each group captures less than 10% of total physician graduates. The use of the terms ‘minority’ or ‘diverse’ should be recognized as a construct of those shaping workforce studies. It is a perception and a series of observations, typically from past tradition or based on majority status.

However those who are a majority in medical education and in medicine are not really a majority. Those who are considered ‘minority’ are actually a majority of the US population.

For many decades approximately 60–65% of US allopathic medical school graduates have been admitted from the top 20% of the population by income. The second quintile captures the next 20% of medical school positions. The remaining 20% of medical school students are admitted from



the bottom 60% of the nation in income. Physicians arise from a small portion of the US population<sup>1</sup>.

Those admitted to US medical schools are also not the full truth of the matter. When considering the 20–25% of physicians who trained in medical schools in other nations, the physician workforce has substantially changed in the past 40 years. Approximately half the new entrant US physicians were born in other nations or have a parent who was born in another nation. United States born physicians are a much smaller group than is perceived.

For US medical schools, about 60–65% of the population manages to claim only 20% of medical school positions. This lower and middle income origin group is actually a majority of the population and this population majority is losing ground<sup>2-4</sup>. About 65% of the US population is also left out of the current healthcare design. Concentrations rule in admission, training, and health policy. This results in 85% or greater levels of health resources, health funding, researchers, most subspecialists, medical school positions, and residency training positions concentrated in zip codes with 75 or more physicians. These 3300 zip code locations have 75–92% of specialists, 70% of internal medicine and pediatric primary care, and 50% of family physicians. The super center and major center practice locations have only 35% of the population found in 4% of the land area. These medical center locations have 400–1100 physicians per 100 000 and 100–250 primary care physicians per 100 000. By any measure of concentrations of physicians, income, health resources, or professionals, this is a location that is ‘inside’ concentrations.

The 65% of the population left out of the plan can be found in 40 000 (out of 43 800) zip code locations with just 23% of physicians. This is approximately 96% of the land area. These are locations with 80–150 physicians per 100 000 or one-fourth to one-half of the national average of 300 physicians per 100 000. Primary care is deficient across these locations with only 20–60 primary care physicians per 100 000. These are locations with higher shares of elderly, lower shares of healthcare coverage, and complex

populations in geographic, cultural, linguistic, and other dimensions.

Divisions in health care involve concentrations of physicians and healthcare resources with a majority of the population ‘outside’.

A similar pattern exists for higher education. Approximately 74% of the students at the top 146 colleges in the nation arise from the top 25% in income. These are the colleges most likely to graduate professionals and leaders for the US. These are also the same colleges that only admit 3% from the lowest quartile and 21% from the remaining half of the population<sup>5</sup>. Access to any college follows the same pattern with 90% accessing college from the top quartile, approximately half from the middle income levels, and 20–30% from the bottom<sup>6</sup>.

While it is possible to address some aspects of health access and better physician distribution by tail-end measures such as medical school admission changes, these efforts have been difficult to sustain. The next step involves reaching out to colleges or high schools to admit ‘broadly’, but efforts are similarly limited. More coordination at the local, state, and national level is required<sup>7-9</sup>.

High school graduation rates are linked to the earliest achievement scores. The signs in education outcomes point to the earliest ages, long before high school or even elementary school, as the best point for intervention if nations hope to distribute physicians and professionals in ways that can make health care, education, and economics more efficient and effective. Child wellbeing is not a strong point for the US, with last or next to last ratings among developed nations<sup>10</sup>. The states with poor child well being, increased child poverty, lower high school graduation rates and other measures of inequities also share the greatest health care quality, cost, and access problems in comparisons with published quality ranking scales (United Health Care Quality Ranking)<sup>11</sup>.



Recommendations for improvements in admission<sup>12</sup>, recommendations for better cardiac outcomes in the state of Maine<sup>13</sup> and preparing those most likely to distribute to become physicians<sup>14</sup> all end up in the same place – better investments in lower and middle income children in the first few years of life. Rural areas typically have top concentrations of lower and middle income children and unique barriers to education and higher education among other challenges. A better start for children is perhaps the only real solution for distributions of professionals, education, economics, health care, and outcomes in health and education. These are the real challenges worth addressing in the remaining years of the century.

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