Beyond Flexner Site Visit Report

University of New Mexico School of Medicine
Site Visit: November 16-18, 2011

Site Visit Team

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Introduction

Beyond Flexner, a W.K Kellogg Foundation-funded study at the Department of Health Policy of the George Washington University School of Public Health and Health Services, explored unintended consequences of the Flexner Report with a focus on innovative models of medical education that address social mission. The Beyond Flexner Study began with the development of an Advisory Committee consisting of sixteen leaders in medical education and health policy. The research team and Advisory Committee identified eight core modalities that stand out as essential elements in the social mission of education, and selected six medical schools which have demonstrated a commitment to strengthen their contribution to health equity.

University of New Mexico School of Medicine was chosen to be a participant in this study as a school in a state with only one medical school – a situation that provides some special challenges and opportunities. It was chosen also because of its well established programs intended to improve the health of New Mexico residents, and its ability to recruit and retain a diverse student body. A team of five individuals, Drs. Fitzhugh Mullan, Marc Nivet, Freddy Chen, and Jack Geiger, and Sarah Diamond traveled to Albuquerque for a three day visit in November 2011. This visit consisted of multiple group and individual interviews based on a standard Beyond Flexner site visit template including site visits to the Pajarito Mesa community, the One Hope community clinic, and the South Valley Health Commons.

We would like to express our appreciation to the University of New Mexico School of Medicine leadership, faculty and students for their cooperation and help towards achieving the goals of the site visit. Special thanks to Dr. Kaufman for arranging a highly successful visit and for his support of the Beyond Flexner Study.

Findings

1. Geographic Commitment

The explicit commitment of the University of New Mexico School of Medicine (UNM SOM) to the population of the state of New Mexico is extraordinary and exemplary. Population health is paramount in the education, service, and research programs of the School of Medicine. In as much as the university is a state institution and the medical school is the only medical school in New Mexico, the commitment to the state might be considered self-evident. The sense of fiduciary relationship with the state goes well beyond that at UNM SOM. The school's admissions strategy, preclinical and clinical placements, graduate medical education rotations, health systems and services research, and graduate tracking all feature a strong focus on counties and communities throughout the state. The health of the citizens of New Mexico is a constant theme in the work of the medical school.

2. Population Health, Vision, and Leadership

A commitment to population health (community medicine, health disparity reduction, and an improved understanding of the social determinants of health) is institutionalized at UNM SOM. Since its inception in 1961, UNM SOM has been involved with locally and nationally funded community-oriented initiatives. The longitudinal nature of this commitment includes participation in national programs such as *The Health of the Public: An Academic Challenge* funded by the Rockefeller and Pew Foundations in 1986 and the Robert Wood Johnson funded *Generalist Physician Initiative* in the mid 1990's. The continuity of leadership at the institution means that numbers of individuals in positions of authority today have grown up in an institution focused on population health. The current operative strategic plan for the UNM Health Sciences Center is entitled *Vision 2020*. Its stated purpose is the creation of an academic health center "that focuses on improving the state's population's health and health equity as a measure of the institution's success."

3. BA/MD Program

In 2006 UNM SOM inaugurated a BA/MD program in which 28 New Mexico high school seniors were admitted to a special undergraduate program that, upon successful completion, guaranteed them admission to UNM SOM. These students were the successful candidates from a rigorous state-wide competition that emphasized the diversity of New Mexico's population in regard to both culture and economics. On completing their undergraduate studies these students are added to the 75 students selected through the standard admissions process. The result is an expansion of the medical school class by more than a third and an increased level of diversity in the medical student body.

4. MPH Certificate

In 2006 UNM SOM initiated an integrated public health certificate as part of the core curriculum for medical students. The certificate program includes courses in health equity, epidemiology and biostatistics, evidence-based practice, health policy and health systems, the biological and social determinants of health, and public health ethics. Beginning with the class that matriculated in 2010, all medical students will graduate with a 17-credit public health certificate.

The Medicine in NM block is a public health course with a clinical component and is the culminating course of the Public Health Certificate. The health equity/public health skills and concepts learned over the last few years are revisited and students have the opportunity to theoretically apply them to a community while reflecting on how they may use community assessment tools in their own future practice. They also develop clinical skills in their area of specialty by working with a preceptor in his/her practice.

5. Teaching Health Centers

The commitment of UNM SOM to extramural, community-based, and ambulatory teaching is profound. A six week Practical Immersion Experience (PIE) in the preclinical years and the Medicine in New Mexico block in the clinical years often provide students the opportunity to

practice in their home towns. It is estimated that 50% of all medical student experience is in outpatient settings and 25% in settings away from UNM SOM. At the residency level, major teaching commitments have been made at federally qualified health centers including The South Valley Health Commons.

6. UNM SOM Takes Seriously the Social Determinants of Health as a Theme of its Work

The social determinants of health are introduced conceptually in the first year of the medical curriculum; they are discussed explicitly in *Vision 2020*; and they are the focus of a UNM Health Sciences Center program entitled HERO (Health Extension Rural Offices). Modeled on the agricultural extension service, this program stations staff members in designated regions within the state to provide a link from those communities to the educational, clinical, research and health policy resources of the university. This program is positioned to provide the university with a strong set of linkages for research and action related to the social determinants of health.

7. Longitudinal Optimization of the Value of Primary Care

Primary care and, particularly, family medicine are at the center of many of the activities of UNM SOM. From the prominent family medicine building that sits in the middle of the UNM SOM campus to the fact that about 15% of every graduating class chooses family medicine for a career, family medicine stands out as a key medical discipline. The prominence of family medicine and primary care at UNM stands in contrast to other campuses where these programs are at the physical and intellectual margins of the medical school enterprise.

Background

State Demographics

New Mexico is the 36th most populous and 5th largest state in the US, with a population of approximately 2.1 million and a land area of about 121,000 square miles.[1] The majority of the population (70%) lives in metropolitan areas, but nearly one-third (30%) live in non-metropolitan areas.[2] Albuquerque is both the most populous and the most population-dense city.[1] From 2000 to 2010, the population of New Mexico grew 13.2%, compared to the US average of 9.7%.[3] The majority of the population growth was among minority ethnic groups, as evidenced by a 46.5% increase in Asians, 24.6% increase in Hispanic/Latinos, 23.9% increase in Blacks/African Americans, and 11.4% increase in Native Americans.[4] During this time, the population of Whites also increased by 15.9%.[4]

As of 2010, 68.4% of New Mexico's population identified as White, followed by 46.3% Hispanic/Latin American, 9.4% American Indian/Alaskan Native, and 1.4% Asian.[4] This is compares to the composition of the US population as a whole, which in 2010 was 72.4% White, 12.6% Black/African American, 16.3% Hispanic/Latino, 4.8% Asian and 0.9% American Indian/Alaska Native.[4]

Economy

New Mexico has only the 44th highest median household income, at $43, 508 ($8,521 below national average).[5] In 2008, 17.1% of New Mexico residents were living below the poverty level—the 5th highest percentage in the country.[5] Rates of poverty are highest among ethnic minorities, with 32% of Hispanic/Latinos and 38% of individuals identifying as "other" (non-Black/African American, non-Hispanic/Latino, and non-White) living in poverty.[2]

Albuquerque Background

In 2010, the population of Albuquerque was 545,852.[6] The population is mostly white (69.7%), with 46.7% Hispanic/Latino, 4.6% American Indian/Alaskan Native, 3.3% Black/African American, and 2.6% Asian.[6] The median household income from 2005-2009 was $45,478, compared to the state average of $42,742.[6] As evidenced by this higher income, Albuquerque's poverty rate is about 3% lower than the state average of 18.1%.[6] Similar to New Mexico overall, poverty is mainly concentrated among minorities, with 22.9% of Blacks/African Americans, 20.9% of American Indian/Alaskan Native, and 14.1% of Asians earning an income below poverty level.[7]

Health Indicators

In New Mexico, 32.7% of children are overweight or obese, compared to the national average of 31.6%.[2] Rates of adult obesity are also below the national average, at 60.7%.[2] Similarly, rates of diabetes (8.5%) and deaths due to heart disease (150.2 deaths per 100,000) are also lower than national averages of 8.7% and 190.9 per 100,000, respectively.[2] Additionally, New Mexico has an annual AIDS diagnoses rate of 6.0 per 100,000, compared to the national rate of 11.2 per 100,000.[2]

New Mexico has the second highest birth rate among teenagers ages 15-19 in the US, at 63.9 births per 1,000.[2] This compares to the national average of 39.1 births per 1,000.[2] From 1991 to 2009, the teen birth rate has only decreased by 20%, while in the US overall it has decreased by 37%.[2] The state also struggles with access to healthy food—only 59.6% of census tracks had healthy food available within a half-mile, compared to a US average of 72%.[2]

Health care system

From 2008-2009, New Mexico had the second highest rate of individuals without health insurance, at 23% compared to 17% nationally.[2] Additionally, 16% of children and 30% of nonelderly adults were uninsured.[2] According to the Commonwealth 2001 State Scorecard,[8] New Mexico ranked 42 out of 51 for health system performance as determined by multiple benchmarks for access to care, quality, cost, and health outcomes. New Mexico also ranked 37th for children's potential to live healthy lives, as measured by indicators such as infant mortality, child obesity, and youth physical activity levels. [8] The United Health Foundation's America's Health Rankings[9] rated New Mexico's overall health as 34th in the nation, citing factors including a high rate of uninsured population, high percentage of children in poverty, and low use of prenatal care.

Total Medicare enrollment in New Mexico is 15% of the population, which reflects the US average; total Medicaid enrollment is 26% in the state and 19% nationally. Among children, 39% are enrolled in Medicaid, compared to 33% nationally, and among adults, 11% are enrolled in Medicaid compared to 10% nationally.[2]

Healthcare Workforce

According to the AAMC,[10] in 2010 New Mexico had 4,673 active physicians, of which 1874 were active in primary care. In 2010, the state ranked 31st in the nation (out of 50, excluding the District of Columbia) for active physicians per 100,000 population (229.8 per 100,000) and 23rd for active primary care physicians per 100,000 (92.1 per 100,000).[10] New Mexico has 196 active patient care physicians per 100,000 population, while the national average is 219.5 per 100,000.[10] In terms of active patient care primary care physicians, New Mexico ranks 28th with 79.9 physicians per 100,000, compared to the national average of 79.4 per 100,000.[10]

The state also ranks 43rd for the number of students enrolled in medical or osteopathic school per 100,000, and 27th for the percent change of students enrolled in medical or osteopathic school, with a 11.9% increase. [10] Finally, in terms of retention, 36.9% of students are retained in-state from undergraduate medical education, and 39.3% are retained in-state from graduate medical education.[10] This compares to national averages of 38.6% and 47.8%, respectively.[10]

History

In the late 1950's, the president and regents of the University of New Mexico began to investigate the feasibility of establishing a medical school dedicated to providing professional medical education as well as medical care for the state.[11] The effort was motivated by a lack of opportunities for students to study medicine in state, combined with the demand for more doctors as a result of New Mexico's growing population.[11] The idea of a medical school received broad support on both local and national levels, and in 1961, the New Mexico state legislature committed its support to the project.[11]

When the first class of 24 students was admitted in 1964, the school consisted of two small buildings that were previously a bottling plant and a mortuary.[11] Originally, the program was designed to be two years in length, and to provide only a basic science education.[11] However, in 1966, third and fourth-year clinical rotations were added to the curriculum. The first class graduated in 1968.[11]

Social Mission Modalities

The remainder of this report will focus primarily on the education of medical students at UNM SOM. What follows is a compendium of the school's activities categorized by social mission modality:

Mission

The University of New Mexico School of Medicine (UNM SOM) adheres to two mission statements. The first, entitled *Vision 2020*, is the operative strategic plan of the UNM Health Sciences Center and reflects a unified effort to "create the first academic health center strategic plan that focuses on improving a state's population's health and health equity as a measure of the institution's success." The second is the stated mission of the School of Medicine:

The mission of the University of New Mexico School of Medicine is to advance the health of all New Mexicans by educating and increasing the diversity of health professionals, leaders, and scientists; providing outstanding and compassionate medical care; advocating for the health of all New Mexicans and pursuing new knowledge and excellence of practice.

The school's mission statement (above) was developed about three years ago to reflect the existing culture of the school. According to a member of school leadership, "if you were to ask most of the faculty to write a mission statement, I think it would be very similar to what we have here." While awareness of the mission may be more acute in primary care departments such as family medicine, school leaders believe that subspecialty departments also adhere to these values--especially because they serve low-income patients. Additionally, the admissions committee is mission focused, and begins every meeting with a slide of the school's mission statement.

A distinguishing characteristic in both the Vision 2020 and the UNM SOM mission statements is the reference to health equity (Vision 2020) and health advocacy (mission statement). Few, if any, other medical schools include this terminology in their mission statements. However, it is evident that UNM SOM's efforts in these areas are prominent throughout the school, ranging from integration of a public health certificate during which students take coursework on health equity and learn the basics of health advocacy, to clinical experiences in rural New Mexico where students are required to develop and/or participate in community projects.

<u>Questions:</u>

UNM SOM has a number of statements of its mission, including Vision2020, the overall school's mission statement, and individual missions for many of its departments. Does having multiple expressions of mission help or hinder the school's unity in pursuing improved health in New Mexico?

Cultivation of the pipeline or "supply chain"

The diversity of the student body at UNM SOM is impressive from a compositional aspect with over 30% of the student body coming from backgrounds underrepresented in medicine. It is noteworthy, as well, for its geographic diversity and other economic diversity. The number of Hispanic/Latino and American Indian students puts UNM SOM in the 95th percentile for diversity in comparison with the nation's other allopathic medical schools. While more work needs to be done to increase the applicant pool for black/African American students it is hard to

quibble with their current success among other underrepresented groups. They have begun to work on supporting and recruiting black students by instituting a center of excellence for African Americans as they have for both Hispanic and American Indians.

UNM SOM has not been the passive recipient of this compositional diversity. This success is the result of a number of well-designed and well-managed pipeline efforts housed within the Office of Diversity. The office works with students as early as middle school through a "Dream Makers Club" and the pipeline extends through the newly initiated BA/MD program. These programs encompass every effective tool identified in the literature: early engagement, science enrichment, mentoring and attention to access barriers. The diversity office staff is fully networked in the community, and their programs are run state-wide.

The suite of programs is designed to increase student body diversity, and draw the interest of individuals with the greatest capacity to serve their local communities in a culturally and linguistically competent manner. Institutional leaders have clearly recognized and begun to capitalize on the role of diversity in achieving health equity for the residents of New Mexico. To achieve this goal, UNM SOM has embraced a holistic admissions process, and has reduced its emphasis on the MCAT (opting for an MCAT floor of 22) in favor of a variety of experience, attribute and cognitive metrics.

Questions:

- Juxtaposed with student diversity, the level of faculty diversity is low. Are there faculty pipeline and leadership development opportunities?
- The diversity office seems understaffed for the level of increasing effort. If and who they hire will be an important measure of institutional commitment to sustain these efforts and link them to institutional excellence. What are other metrics of success for the diversity office efforts beyond compositional change?
- Where are the opportunities for deeper engagement with the African American community given they make up less than 1% of the state population?

Student admissions

Like virtually all other aspects of the University of New Mexico School of Medicine's programs, admissions policies are heavily influenced by the School's explicit commitment to meet the specific health care needs and improve population health status in this predominantly rural, substantially diverse, and relatively lower-income state. Admissions are nearly exclusively limited to state residents (plus a few from nearby states that have no medical school). One goal is to admit students who are deemed likely to remain in New Mexico to practice. In this and other respects, the school, as a state-funded institution, is not just responding to the interests and expectations of its funder, but also to its own assessments and perceptions of the state's most urgent health workforce needs.

There are, in effect, two separate (if related) admissions programs: one for the conventional track of admission of college graduates to the UNM SOM and one for the relatively recent BA/MD Program for high school graduates. These will be considered separately.

UNM SOM General Admissions Process

Despite the pervasive and highly focused mission statement of the 20/20Vision declaration and its multiple ramifications in curriculum, primary care emphasis, community engagement and social commitment, UNM SOM's stated admissions policy seems fairly conventional, seeking to choose students who can be prepared for "the full spectrum of medical careers" and employing traditional criteria: academic achievement in college, MCAT score, letters of recommendation, and personal interviews. New Mexico residency is a near-absolute prerequisite and bilingual skills are valued. Mention is made of the state's physician workforce needs and distribution, though rural needs are not explicitly mentioned. A stated goal is to find students who seem likely to stay and practice in New Mexico.

The length, intensity and specificity of the stated admissions policy relating to racial and ethnic (and, by implication, socioeconomic) diversity is striking. Diversity is seen as benefitting both students and the state. The faculty and leadership commitments to the 20/20Vision is evident, and is presumably reflected in the work of the admissions committee. The facts, so far (and the 20/20Vision mission is relatively recent) reflect the limits of the admissions process itself to achieve those goals, because so many of the factors that determine an admitted student's career choices and practice location are outside the School's control. At present, only 25 percent of UNM SOM graduates are practicing in New Mexico. While approximately 8000 physicians have New Mexico licenses, the state's current physician workforce total is 4565, suggesting that many of the 8000 have left. Of the 4565, roughly 40 percent are UNM SOM graduates. Almost 50 percent of graduates, however, are in primary care disciplines. It should be remembered that these figures, in the main, represent earlier graduates of UNM SOMSOM before the introduction of the 20/20Vision mission and curriculum. The latter is likely to improve these outcomes. But students reported to the Beyond Flexner site visitors told us candidly that the current medical student body was divided roughly 50/50 between those who felt committed to the goals of primary care choice, community engagement, rural/small-town practice, and care for underserved populations, and those who felt indifferent or even hostile to it. It remains to be seen whether current outcomes will improve over time. Roughly 50% headed for primary care is an impressive accomplishment, and it is certainly true that New Mexico has evident need for many other specialists (anesthesiology, trauma surgeons, etc.), especially in rural areas. While the "hidden curriculum" that afflicts so many medical schools and academic medical centers is far less evident at UNM SOM, it remains true that UNM SOM is indeed preparing its graduates for "the full spectrum of medical careers."

Admission to the BA/MD Program

This relatively new program represents an attempt to enlarge and change the UNM SOM medical school's student composition and outcomes in specific alignment with its primary care/community engagement and rural health workforce goals, by both tapping and preparing a new pool of applicants. This is not a conventional undergraduate pre-med track, which is also

available at the university. Instead, it is a separately admitted, specifically state-funded educational track for four years of premedical education leading to the BA degree, with a guarantee of admission to the medical school for those who successfully complete this undergraduate curriculum. Recruitment into this program has focused on virtually every small regional/rural high school in the state, many of which have limited educational resources (e.g., no advanced placement courses) and limited science facilities: in sum, relative poverty of educational reparation and, quite likely, relative poverty of aspiration. These are high school graduates who have overcome the impressive data on deficiencies in K-8 educational accomplishment in rural and especially low-income areas of the state, but would be less likely to win acceptance to medical school via conventional pathways. The leadership, flexibility and commitment of faculty to this program was impressive: aware not only of the educational and mentoring supports that were needed, but equally aware of the cultural barriers and problems inherent in a transition from small rural school environments to full-time immersion in a large university campus in an urban area. Applicants must be New Mexico residents (except for Navajos and students from other reservations) and commit to remain and practice in New Mexico.

A separate admissions committee governs selection for the program. To be considered, applicants must meet a floor of ACT or SAT scores, be seniors in a New Mexico high school, demonstrate a commitment to care for underserved populations, and show evidence of community engagement. Accepted students have substantial financial support, may room in dormitories with "conventional" medical students, and spend time shadowing rural physicians and conducting a summer community project. They must also prepare for and take the MCAT exam and meet the medical school's required score of 22 or better to be admitted.

Because the program is relatively recent, little data was available on admission, attrition, and successful matriculation to the B.A. and admission to the medical school. The first cohorts of graduates are now in the first and second years of UNM SOM; those numbers should grow in coming years. It will be interesting to learn the predictive value (if any) of the ACT/SAT and MCAT score requirements; whether these students remain a separate cohort within the medical school; and whether they change the overall student culture of the school. Further ahead, since there is substantial evidence that rural recruits are likelier to practice in rural areas, it will be important to determine if graduates of this BA/MD track significantly ameliorate physician workforce distribution problems in the state.

Questions:

Some questions: to inform and improve admission decisions and student selection, both follow-up and retrospective data would seem important to pursue. On follow-up: why did UNM SOM graduates who left the state do so, and is there a discernible pattern to their reasons? When did they do so— after residency training (in the state, or elsewhere) or after some time in practice in the state? Similarly, why did those who stayed do so, what and where were there residency experiences, and what determined their practice locations? For both groups, did they choose primary care or non-primary care careers, or rural or urban practices? With such data in hand, it would be worth exploring retrospectively to review their admissions records. Prospectively, for more recent graduating classes under 20/20Vision, such ongoing investigation would not be

difficult to build Into the system, to help refine the admissions decision-making process and further improve its alignment with the School's workforce and distributional goals.

Structure of curriculum

The undergraduate medical education curriculum at the University of New Mexico School of Medicine is unique in its inclusion of public health courses, emphasis on community based service learning, and early clinical exposure. All of these elements are designed to graduate doctors who will serve the health needs of New Mexico.

In 2010, University of New Mexico School of Medicine (UNM SOM) launched an integrated public health certificate program as part of their core strategic goal to "make more progress in health and health equity than any other state by 2020." Beginning with the class of 2014, all medical students will graduate with a public health certificate.

The public health portion of the curriculum begins with 40 hour, two week course in health equity at the beginning of students' first semester. The goal of the course is to provide students with a framework to understand health from a socio-ecologic perspective. Following this introductory course, students receive weekly lectures on epidemiology and biostatistics for the first 18 months of the curriculum. Additionally, students take a two-year Evidence-Based Practice course beginning in their first year, where they gain skills in question formulation, categorizing questions, searching for high-quality evidence, critical appraisal, and decision making. In the third year family medicine clerkship, forty-two hours are spent studying the biological and social determinants of health. During this rotation, students are required to design and/or participate in a community project which often describes the relationship between patients and the health system, examines approaches to healthcare from different perspectives, or presents a health policy issue of interest to the student. Finally, as part of their required fourth-year ambulatory medicine rotation, students participate in two public health ethics seminars.

Additional ethics instruction is delivered through the Perspectives in Medicine course (PIM), which students take for their first three years. Though PIM is not a formal class in ethics, it is intended to provide a supportive environment where students can discuss difficult situations they may encounter as health practitioners. PIM sessions consist of small groups of students paired with two or three faculty advisors from varying backgrounds.

It is important to note that the public health certificate program is a curricular innovation, and the first class to go through the entire sequence described above will not graduate until 2014. Therefore, it will be some time before outcomes can be measured and the effectiveness of the program assessed.

Community-based service learning is an integral part of the curriculum as evidenced by two required rotations: the Practical Immersion Experience and Medicine in New Mexico. The Practical Immersion Experience, or PIE, is a six-week clinical rotation during the summer after students' first year, hosted in a community outside of Albuquerque. Students spend at least three half-days per week in their assigned clinic, and see five patients each half day. Additionally,

students spend one day per week in the community learning about population health issues, and are required to design and/or participate in a community project.

Medicine in New Mexico is completed during the fourth year of the curriculum. Students work for a minimum of four weeks at a community-based site, and have the option to extend if they wish. As the culminating experience in the certificate curriculum, students design a theoretical intervention to a clinical/public health issue by incorporating theories learned over the last four years.

In addition to public health courses and community-based service-learning, students also benefit from early clinical exposure. Beginning in January of their first year, students participate in continuity clinic one afternoon per week. The continuity clinic continues through the second year (with a break for summer), and students may choose to remain at their clinics through subsequent years. This experience serves as an opportunity for students to develop relationships with both patients and practitioners.

Question:

The UNM SOM curriculum reflects efforts to institutionalize social mission concepts at a large, public medical school. School leadership consistently expressed strong support for these initiatives as did those students who had a propensity for community service. It was, however, difficult for the site visitors to accurately gauge the opinions of all students and faculty. At UNM SOM, as elsewhere, full buy-in for community oriented programs will always be a challenge. Documentation of success with traditional elements of the school would be important to validate the sustainability of all such programs.

Location of clinical experience

As the only medical school in New Mexico, UNM SOM's training mission and curriculum reflects the needs and geographic diversity in the state. UNM SOM offers varied clinical experiences throughout the state. Unlike many medical schools, UNM SOM makes a conscious effort to expose students to both inpatient and outpatient settings, reporting overall 50% of student clinical experience is in outpatient settings. In addition, UNM SOM commitment to 'de-institutionalize' clinical experiences and move medical student training into the community is impressive. By report, approximately one quarter of medical student clinical training takes place away from UNM SOM.

Several clinical training experiences are worthy of specific mention. In the pre-clinical years of medical school, the six-week Practical Immersions Experience (PIE) and ongoing Continuity Clinics place students into community-based settings. The PIE sends many of the students to do preceptorships and clinical training in their own hometowns. In the clinical years, Medicine in New Mexico– a required clinical rotation in settings such as community clinics – is another notable effort to bring students to community-level clinical experiences. There are UNM SOM patient care and educational activities in over 155 communities in New Mexico. In Albuquerque, clinical experiences may tend to be more traditional hospital-based but there is a strong presence

of the Community Health Center partnership sites and several student-led clinics providing care to underserved patient populations in town.

These experiences gave the strong impression that UNM SOM students are exposed to and in some cases become closely engaged with local communities. A significant proportion of students spend time in free clinics and rural clinics. UNM SOM also promotes its close relationship with Community Health Centers, especially in New Mexico. The Health Commons is a pioneering partnership between UNM SOM and a local FQHC. Reflecting this partnership, there is mandatory exposure of medical students to federally-qualified community health centers.

Questions:

UNM provides a model for other well-established Academic Health Centers who are focused on their social and service mission. UNM SOM's success in community-based clinical training raises these questions for similar institutions:

1. Does the de-institutionalization of clinical training compromise educational quality? What are the best practices to maintain teaching quality and connection to resources at the medical school?
2. Do international/global health training experiences fulfill or compete with the school's mission for service?
3. The focus on geographic diversity and community engagement highlighted a surprising finding that the clinical training site was potentially more important than the quality of the clinical preceptor in that site. Many schools struggle with this dilemma and it is worth noting that environments may be just as or more influential than one individual physician teacher.
4. There did not seem to be much deliberate focus on finding practices that fit Patient-Centered Medical Home criteria or demonstrate advanced primary care models. While many of these sites are in transition and may not be good teaching sites, there will be pressure going forward to demonstrate and role model the functions of PCMH clinics and physicians in these settings.

Tuition Management

For the class of 2015, in-state tuition is $16,170 and out of state tuition is $46,347. In relation to other US allopathic medical schools, the total cost of attendance for in-state graduates is in the 20^{th} percentile and for out of state graduates is between the 40^{th} and 50^{th} percentile, making UNM SOM a comparatively affordable option, especially for New Mexicans. Total average debt for graduates in 2011 is $118,000 which, again, in comparison to the other allopathic medical schools in the country positions UNM SOM as a leader in terms of cost. In addition, while there is little in the way of truly innovative initiatives to reduce student debt, UNM SOM has made optimal use of available state and federal financial incentives aimed at fostering primary care career choice and location choice to physician shortage locales. Most notably, the state legislature recently doubled the loan repayment for state service awards.

The composition and approach of the financial aid office provides an important complement, supporting students with financial management throughout their education. There is a seamless network of technical support and encouragement aimed at helping students hold true to their

primary care and service aspirations. This office makes over $400,000 in scholarship funding available annually, with a few such awards recently shifting from a focus on scientific achievement to a focus on community engagement.

Conversations with senior leadership revealed a strong commitment to producing primary-care oriented physicians to serve the needs of the state population. Controlling tuition and student debt are viewed as integral to delivering on this mission, in tandem with their pipeline programs, admissions process, curriculum and values-centric culture. Available metrics indicate UNM SOM is hitting its targets for graduates that pursue primary care and/or serve in rural and other shortage areas. However, there is room for improvement on the percentage of graduates remaining to practice in-state. UNM SOM is tackling this goal with expanded pipeline initiatives, particularly a new joint BA/MD degree program.

Questions:

Going forward, UNM SOM will need to expand its use of diversity-related metrics to evaluate progress, sustain or expand investment in successful initiatives, and document outcomes. Some suggested metrics include:

- What is the composition of the student body in terms of socio-economic status (SES) and how does it compare nationally?
- What is the debt level of students entering UNM SOM (high or low) as compared nationally?
- What is the anticipated level of debt for BA/MD degree graduates?

Mentoring/role modeling

Mentoring, in its formal sense of assigned mentors and advisers, occurs throughout the four years of the UNM SOM curriculum, in two forms: from the faculty at the medical school, and from community-based physicians in placements during student placements in community health centers and other community practices elsewhere in the state. Role modeling, similarly, occurs in both of these settings. Our team had brief opportunities to discuss these issues with a small number of students, heard formal presentations about some in-house mentoring programs (e.g., pediatric mentoring), and some observational opportunities at a community health center, the Health Commons. Pediatric mentoring was illustrative of the structured in-house components: a 4-year program for interested students, with one mentor for 5 to 6 students with common interests in the field. Mentors were mostly clinical skills teachers; there were in addition structured seminars on special topics from other faculty, including public health oriented tutorials. Faculty mentors were selected for these tasks, but in general there was very high faculty interest (70%) in having the opportunity to serve as mentors.

Descriptions of mentoring, and interviews with a few mentors in the BA/MD program were particularly impressive. Although from the basic sciences and liberal arts rather than medical clinicians, these faculty mentors seemed passionately committed, with a full understanding of both the educational and emotional needs of their students. They seemed an essential component of the effort to broaden the pool of medical school applicants in New Mexico.

Questions:

Concern was expressed about the academic knowledge and quality of practice of community-based physicians serving as mentors and role models—an inevitable component of such community-based student placements for clinical exposure and practice—a common concern at those medical schools that rely substantially on such placements; at UNM SOM, well more than 25% of student learning sites are off-campus, non-hospital, ambulatory care clinical sites of training. Only passing mention was made of the powerful role of PGY1-3 residents and fellows as teachers, mentors, and role models for students. Residents in the Health Commons and other CHCs may be both important and salutary. Research and data on student responses to, and evaluations of, all these experiences would be useful.

Post-graduate engagement

A medical school's ability to engage and influence career choice and post-graduation pathways is often discussed in terms of the 'hidden curriculum'. UNM SOM senior faculty and administration acknowledged its presence, and, despite award-winning rates of primary care production, over half of UNM SOM graduates choose non-primary care specialties and not all are fully committed to the social mission of service in New Mexico. At the same time, UNM SOM faculty are overwhelmingly supportive of the mission and these role models are the most effective tool in countering 'hidden curriculum.'

There was considerable opportunity to learn about the graduate medical education (GME) programs at UNM SOM, in particular the family medicine training program and its relationship with the Health Commons. The residency currently has four 1+2 Rural Training Track (RTT) locations (Farmington, Santa Fe, Roswell, and Silver City). These RTT sites seem to be well developed and UNM SOM family medicine leads the nation in distributed models of residency training. Outside of UNM SOM, there is another community-based family medicine residency program in the state.

There appears to be a potential growth opportunity for UNM SOM residency training in partnership with the Health Commons and community health center in Albuquerque. This robust relationship may satisfy the 'consortium' model of eligibility for HRSA's Teaching Health Center program, affording funding for growth of the residency program, as well as other training programs such as dental residencies. The South Valley Health Commons appears to be a strong and highly functional Community Health Center and already has a proven track record in residency training. The Teaching Health Center would be an opportunity to highlight the partnership between an academic health center and community health center. Three years of funding from HRSA remain available and UNM SOM and South Valley have a unique opportunity to capitalize on the partnership they have already created.

Questions:

1. What is the extent of primary care career counseling and role-modeling at UNM SOM? Identifying and supporting students interested in primary care is a well-established strategy for countering the 'hidden curriculum.'
2. It was less clear the extent to which UNM SOM residency programs have embraced 'new model care' and PCMH principles. South Valley was beginning its transition to an electronic health record. Continued support of primary care redesign and involvement of residents in transformation of their existing clinical sites will only increase as a critical element of GME in the future.
3. GME clinical experiences with the underserved communities tended to reflect well-established but traditional models of public health and community-based outreach. The pressure will increase to support communities using EHR integration, population-based data analysis and interprofessional team-based outreach. UNM SOM GME programs will need to move in that direction in order to maintain their leading status in primary care training.

Challenges

The site visit team also identified several areas in which there were ongoing questions concerning the UNM SOM social mission program.

1) Full Faculty Buy-In

The team spent most of the time during its site visit with faculty and students active in the programs associated with the social mission/population health aspects of the school. Clearly there was strong buy-in and great enthusiasm among these groups of individuals. This left questions in regard to the attitudes of faculty in more traditional departments. Assurances were given that these faculty members were strongly supportive of the school's social mission. *Vision 2020*, as the product of the full UNM Medical Center, certainly reflects broad endorsement for a strong social mission for the school.

2) Sustainability

The confluence of social mission oriented leadership, state funding and support, and the smart use of federal and philanthropic monies have provided the environment and resources for the culture of social mission to grow strong in the school. Since this formula of support and leadership is exceptional in U.S. medical schools, questions were raised concerning the sustainability of the UNM mission. The length and continuity of the mission were cited as answers to the concern. Additionally it was pointed out that many of today's leaders were trained at UNM SOM and have grown up with a sense of community orientation as part of medical education.

3) State Retention

Despite the focus on programs in and for New Mexico, long term figures indicate that medical school graduates remain in-state about one third of the time and those with both medical school and residency remain about half of the time. Although comparable figures were not available for

other states, the team was concerned that this might represent less in-state retention than might be hoped for.

4) Modeling Future Practice

It was noted by the team that many of the ambulatory and rural assignments for medical students and residents were with small or solo practices. Given the growing importance of electronic medical records, team based care, quality assurance programs, and referral networks, concern was raised about whether this training was sufficiently oriented to the evolving medical workplace.

Conclusion

Since its inception, the University of New Mexico School of Medicine has had service to the state of New Mexico as a clear priority. This "geographic mandate" creates social mission in that it ties all programs of the school to the conditions and needs of the state and its population. The UNM SOM experience has much to offer to the study of social mission in medical education since the school demonstrates what the close alignment of an institution with a population can do in regard to education and service. The creative educational initiatives that UNM SOM has built on the platform of this state commitment are instructive to the Beyond Flexner community because they demonstrate some novel ways in which social mission can be infused into medical education. These would include the BA/MD program, the MPH certificate program, the use of community health centers as teaching sites, and the HERO (Health Extension Rural Areas) program. UNM SOM is a pioneering institution in social accountability in medical education and has a great deal offer to students of the subject.

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