VitalSigns

CHM Graduates: Serving the People

Office of Medical Education Research and Development — Fall 1996

What is *VitalSigns*?

With this issue, ***VitalSigns*** is inaugurated as a periodic report on significant events and outcomes of educational programs in the College of Human Medicine (CHM). Twice each academic year, ***VitalSigns*** will use local and national data to explore an important dimension of CHM's educational efforts. Future issues will examine such themes as "clinical performance," "knowledge of medicine," and "environment for professional development in CHM."

VitalSigns will be presented in an interpretive style to make significant observations and conclusions evident. Each issue will invite perspectives on the future direction of the college's effort. Reports will focus on our students and graduates and on the programs that direct and strengthen their interests, capacities, and commitments.

VitalSigns is produced for CHM faculty and colleagues by the program evaluation faculty of OMERAD, in consultation with the Associate Dean of Academic Programs. ***VitalSigns*** intends to promote broad awareness of the college's efforts to reach its educational goals and to stimulate focused, informed discussion of issues. VS

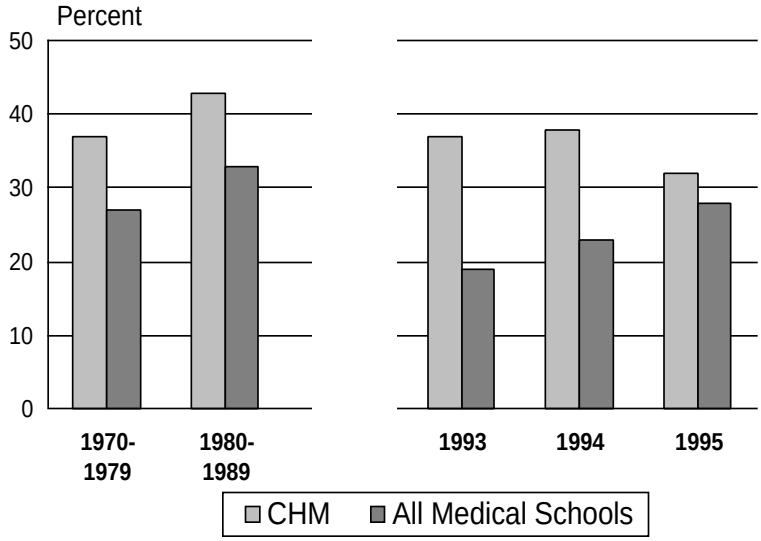
The Primary Care M.D. School of Michigan

When it was ranked as a leader in primary care by *US News and World Report,* the College of Human Medicine (CHM) received national notice. Although such surveys aren't substantiated empirically, in this case it supported a commitment made years ago in the CHM mission statement: "a central focus of the mission of this College is the education of primary care physicians."

What distinguishes a truly primary care oriented medical school? Markers published by established professional organizations provide some indication. For example, the Association of American Medical Colleges (AAMC) administers a yearly Medical School Graduation Questionnaire (GQ) which asks graduating seniors their specialty plans. Nationally, a low point for generalism occurred in 1992, when fewer than 15% of graduates planned certification in primary care fields. Since that time, due to strong external forces, there have been four consecutive years of increased interest in primary care. By 1995, almost 28% of all graduating seniors anticipated certification in a generalist specialty.

CHM's picture differs. Since its inception, CHM has always exceeded the national average in the percentage of graduates entering primary care. Among

Primary Care: The Narrowing Gap



Source: American Medical Association (1970-89) & Association of American Medical College (1993-95)

CHM seniors in 1995, about 32% plan a generalist career. Based on AAMC data, CHM is a leader in producing a consistently high percentage of primary care graduates, but the gap is clearly narrowing.

Continued on page 2

Primary Care School continued from page 1

WHAT IS PRIMARY CARE?

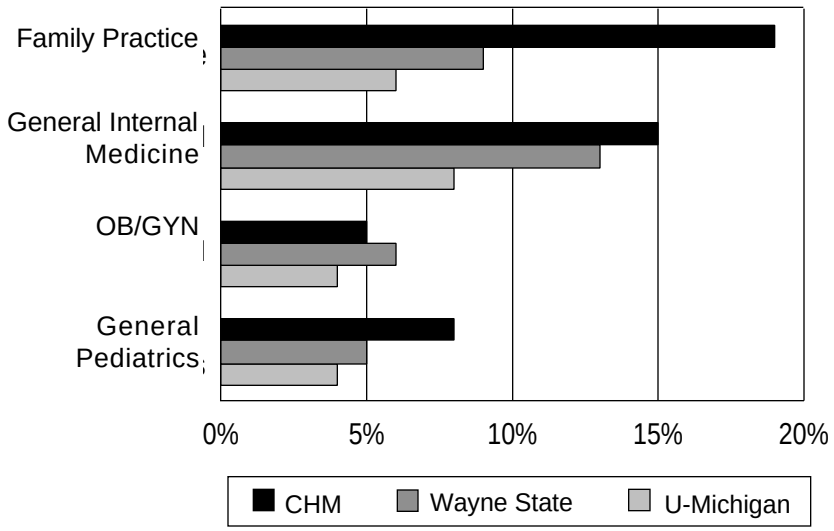
IT DEPENDS.

The AAMC includes FAMILY PRACTICE, GENERAL INTERNAL MEDICINE, and GENERAL PEDIATRICS in its definition.

The AMA includes FAMILY PRACTICE, GENERAL PRACTICE, INTERNAL MEDICINE, OBSTETRICS and GYNECOLOGY, and PEDIATRICS, excluding in its definition the subspecialties within these general specialties.

A different measure of primary care comes from the American Medical Association's *Physician Characteristics and Distribution*, 1995-96 Edition. The AMA monitors practicing M.D.'s rather than reporting intentions of graduating seniors. The accompanying graph compares the three Michigan M.D. programs on the percentage of graduates entering four recognized primary care specialties.

Practicing Physicians: Comparing Michigan M.D. Programs



Source: American Medical Association (1996)

It reflects all practicing M.D.'s identified by specialty and school of graduation. One must be cautious in drawing simple conclusions. Because the WSU and UM class sizes are more than double that of CHM, they produce, in actual numbers, more primary care physicians. However, in terms of percentages, CHM's reputation as the Michigan leader in primary care seems well deserved. VS

What Influences Choice of a Primary Care Career?

A recent study by Bland (*Academic Medicine*, 1995) suggests there are three general categories which currently explain primary care career choice:

Student Characteristics	Curriculum	Institutional Culture
• Older • Female • Married • Broad Undergraduate Background • Lower Income Expectations • Interest in Diverse Patients/Health Problems	• A required family practice clerkship and a significant number of weeks. • Longitudinal primary care experience.	• Academically credible primary care faculty are represented in the governance structure • Mission Statement

VitalSigns

Service in National Context

This issue of ***VitalSigns*** examines the College of Human Medicine working to "serve the people." The focus is on how CHM graduates help to meet some long-standing needs in medical practice. The "vital signs" and outcomes chronicled reflect dimensions of the CHM mission, but they have also emerged, in recent years, as central in national discussions of the direction of medical education.

The GPEP (General Professional Education of Physicians) report, *Physicians for the Twenty-First Century*, placed strong emphasis on selecting and developing students with skills, values, and attitudes responsive to the population's health care needs. It stated that physicians should be "committed to ... serving the greater society." The Institute of Medicine's report, *Medical Education and Societal Needs*, reminded the profession of its responsibility for assuring equity of access to health careers and addressing the continuing presence of populations that are medically underserved. The Council on Graduate Medical Education (COGME), in a series of more recent reports, has highlighted the compelling need for more generalist physicians and for a distribution of physicians, geographically and ethnically, more representative of the population served. These concerns, long-standing within the College of Human Medicine, have been recognized as vital interests of the nation's medical establishment.

While there has been broad national backing, in the abstract, for the medical education outcomes reviewed in this issue, regional and national studies provide evidence of strong resistance. The Association of American Medical Colleges' project to increase the ethnic diversity of medical student classes has seen no evident progress in the past two years. Student and faculty opinions, in both Michigan and national samples, have indicated disdain for primary care physicians' expertise in medically consequential decisions. A national study documents tendencies in the culture of medical schools to derogate generalist care and to discourage students' choice of primary care. The College of Human Medicine strives for outcomes that foster equitable access to health care within a surround of countervailing presumptions and practices. The achievements recorded in ***VitalSigns*** should be judged against the college goals; perhaps they should also be viewed in the context of an academic culture of medicine that has been said to provide "a chilly climate" for realizing these goals. VS

PERSPECTIVE:

Dean William S. Abbett

Medical schools face major challenges. But I am reassured and reinvigorated by the knowledge that the graduates of the College of Human Medicine give substantive meaning to the college's motto "serving the people." Where there are clear needs, CHM graduates have responded. A large and increasing proportion of our graduates enter primary care. Significant numbers locate in rural and underserved areas across the entire state, no doubt encouraged by the knowledge of local communities they gained as CHM students. As they enter and mature in practice our graduates focus and support efforts to improve the health of their community. CHM graduates now better reflect the rich diversity of the population they serve. These are all outcomes that the college has sought with great effort and energy.

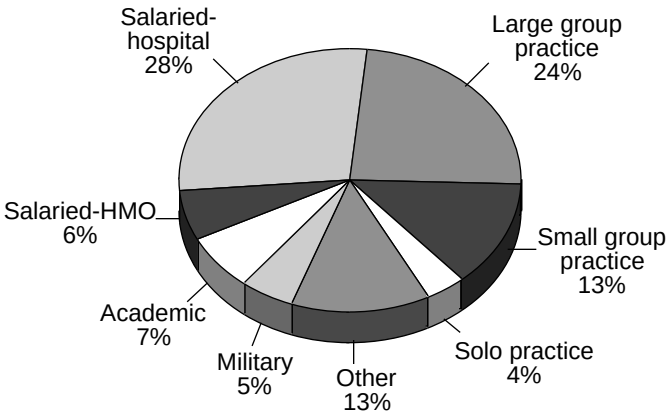
I thank our colleagues in OMERAD for documenting some major achievements of the college and its graduates. But my warmest thanks go to all in our communities—faculty, staff, administrators, supporters—who work so hard to secure these achievements. The good "news" reported in this issue is the result of your efforts; it is news in which we can all take pride.

While we can all take encouragement from the evidence of our efforts and accomplishments, we must continue to monitor and challenge ourselves to achieve our goals more fully. In our own practices and in the preparation we give our graduates, the College of Human Medicine has always identified and responded to the health care needs of those we serve. That process continues today. For example, we are creating a new site in the northern lower peninsula as an extension of our U.P. program, doubling the number of our students prepared in rural settings. Like all medical schools we are faced with major new challenges, but our history calls us to see these as defining new health care needs to which we respond. Let this issue of ***VitalSigns*** be a sign to all reminding us of the continued life and vitality of the College of Human Medicine.

Salaried Practice Burgeoning

Recent graduates of the College of Human Medicine are choosing different practice arrangements. Salaried practice has become increasingly prevalent, with physicians employed by either a hospital (nearly 30% of recent entrants) or an HMO (approximately 6% of recent entrants). The proportion of graduates entering salaried hospital employment has increased sharply over the past 10 years as hospitals recast themselves as health care systems, acquiring or developing primary care and other practices in the process. Somewhat less than 40% of recent entrants to practice have joined group practices, down slightly. In contrast, fewer than 5% of recent practice entrants are in solo practice, compared to nearly 10% five years earlier, and to over 20% of graduates 15 years earlier. These choices mirror trends reported nationally (Kletke *et al.*, *JAMA*, 1996).

Recent Graduates Opt for Salaried Practice



Source: CHM Graduate Follow-up Study (1988-1990 Graduates)

How will an increasingly corporate structure of medicine affect CHM graduates' choices and commitments to the outcomes reported in this ***VitalSigns***? Two aspects of CHM graduates' reported satisfaction with practice are suggestive. Graduates who work as employees of a hospital system are somewhat less likely than those in solo practice to report satisfaction with their independence and freedom from supervision, but are considerably more likely to report satisfaction in using medicine to change society. The decision to take salaried employment is influenced by a host of practical and economic factors. However, once within the organization some CHM graduates may find limits on their freedom to be socially responsive, while others find organizational resources that enable a more effective response to social needs. VS

Looking to the Future:

CHM Graduates as Teachers

The practice of medicine is in part founded on a social contract joining physicians and the people. This social contract includes an expectation that each physician generation will take part in the education of ensuing generations.

To what extent do our graduates accept responsibility for teaching future physicians? Few physicians are exclusively involved in medical education. According to AMA statistics, fewer than 2% of practicing M.D.'s nationally indicate teaching as their major professional activity. In Michigan, 1% of practicing M.D.'s describe teaching as their major professional activity; 1.8% of CHM graduates do so. CHM graduates are, then, about as likely as their national counterparts to teach full-time.

CHM graduates contribute to teaching in other ways. Half (51%) of all CHM graduates have defined commitments to medical teaching, spending on average 11% of their time in education-related activities. The 5% of CHM alumni who are HMO-based report the least amount of time (4%) teaching. The 40% of CHM graduates employed in hospitals, the military, or academic settings are most likely to be involved in medical teaching; they report an average 14% of their time involves teaching.

Most CHM graduates are practitioners. The majority have found a way to accept responsibility to both maintain the public's health and to assist in the training of new physicians. VS

What's your opinion of
***VitalSigns*?**
Suggestions, Reactions, Challenges, even Praise, from readers
would be appreciated.

Please e-mail your comments to **Vitalsig@pilot.msu.edu**

or drop us a letter at

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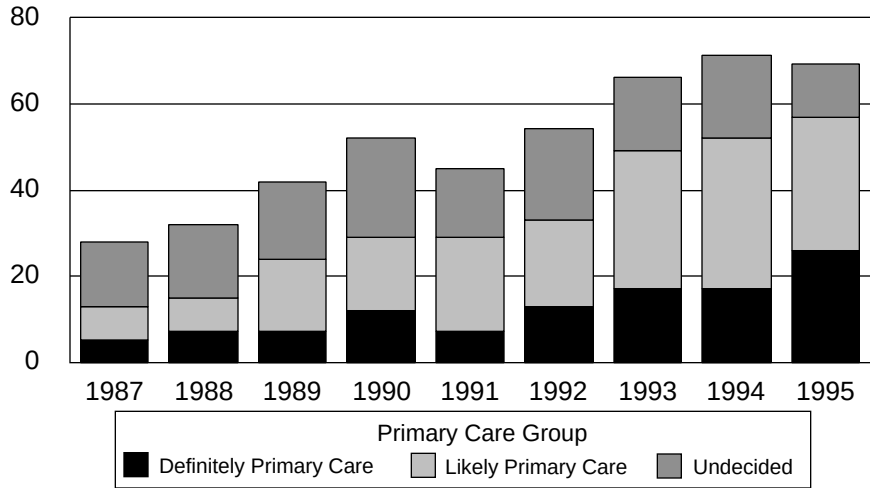
Undecided Students Make A Difference

CHM matriculants increasingly indicate an interest in primary care practice. According to an annual AAMC survey, primary care interest among CHM matriculants has increased annually since 1987, with 57% of the 1995 class indicating an interest in Family Practice, Internal Medicine, or Pediatrics. Conversely, the number of students with interests in other medical specialties has decreased, while the undecideds have remained relatively constant at about 18%.

For one in every three students who matriculated between 1987 and 1989, primary care interest changed from matriculation to graduation. Students whose interests moved away from primary care to other specialties indicated that clerkships in the specialty area and encouragement from practicing physicians influenced their choice. In contrast, students whose interests changed to primary care specialties cited an emphasis on patient education and prevention, diversity in diagnoses, lack of overcrowding in the field, and ease of getting a residency as factors in their choice of specialty.

Of the 18% of students who were undecided at matriculation, two-in-five reported an interest in primary care at graduation. Those who chose primary care specialties cited the importance of patient education and prevention in their specialty decision. Undecided students who eventually opted for specialties other than primary care were more likely to report being influenced by income and educational debt considerations.

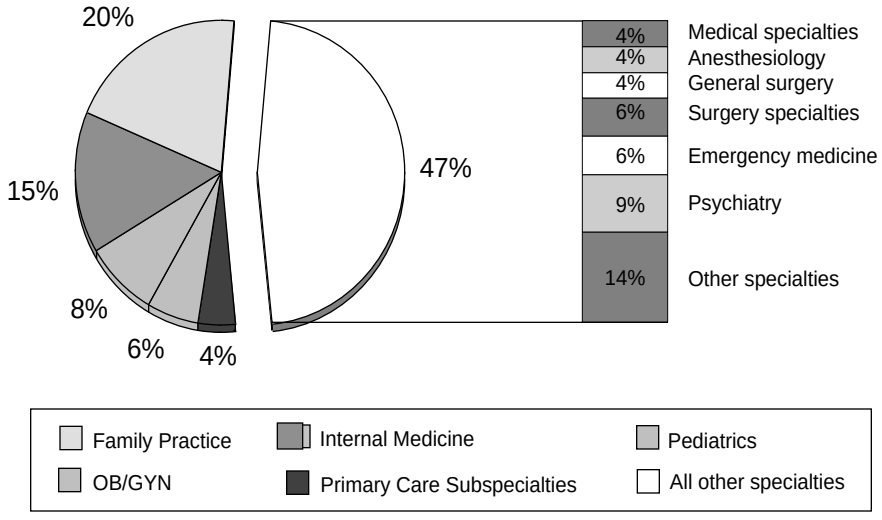
AAMC Matriculating Student Survey: Interest in Primary Care Specialties



Source: Association of American Medical Colleges

Regardless of their initial specialty interests, about two-thirds of CHM matriculants maintain their interests through to graduation. It is the students entering CHM undecided with regards to specialty interests who provide the greatest opportunities for promoting interest in primary care. The college's continued leadership in primary care education may depend on influences in the formal and informal curriculum that can affect students' career choices.[5]

Specialty Choice of CHM Graduates From 1972-1995



Source: American Medical Association (1995)

Graduates Respond to Community Needs

When they enter practice, CHM graduates appear well prepared to serve their communities and disposed to give this service, according to residency directors' ratings of CHM alumni and the alumni's own characterization of their practices and patient populations.

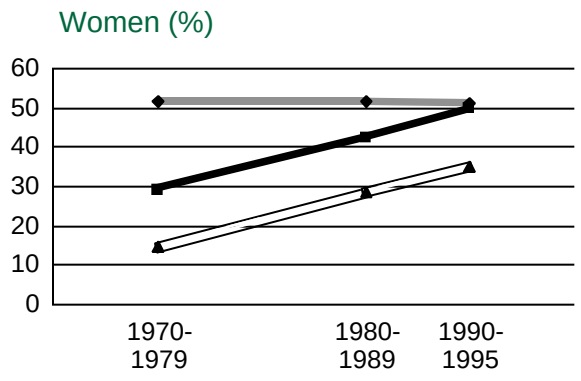
CHM alumni have been asked to report characteristics of the patients they serve. More than a third of the patients of these CHM alumni have incomes below average. CHM graduates report that, on average, almost 35 per cent of their patients are in vulnerable economic groups, those either uninsured or covered only by Medicaid; across the nation slightly more than 20 per cent of all patients are in these groups. CHM alumni also provide medical care to ethnic minority populations. The U.S. population in recent years has included about 27% in ethnic minorities, who are much more likely than white Anglos to be medically underserved. On average, just less than a third of the patients of CHM graduates are from ethnic minorities. Thus, CHM graduates are serving a higher proportion of ethnically different patients than the average physician.

Residency directors give CHM alumni very high ratings on their responsiveness to community, including both sensitivity to community health issues and demonstration of respect for patients of diverse backgrounds. Of those who graduated from CHM between 1990 and 1995, 89% were rated by residency directors as above average compared to fellow first-year residents. Other characteristics of CHM graduates that are strongly associated with community responsiveness include their professionalism, communication skill, and readiness to learn. Although the CHM graduates consistently elicit strong ratings from program directors on all behaviors evaluated, they are rated most highly on the cluster of competencies associated with community responsiveness.

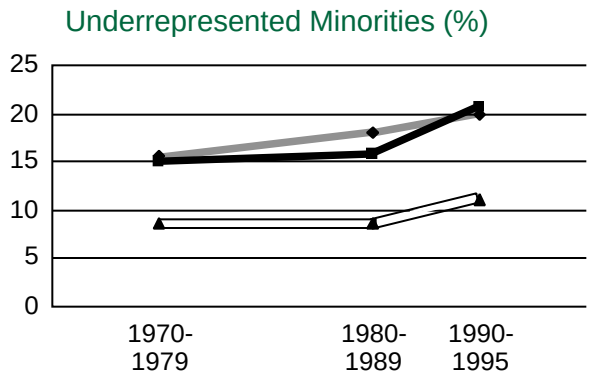
A set of questions, developed by Pathman and associates at the University of North Carolina, about physicians' involvement in activities in their communities, was recently put to CHM alumni from the graduating classes of 1986 and 1990. More than half reported working with community organizations concerned with health, by volunteering expertise and/or speaking to community groups. Approximately 40% of the 1986 CHM graduates had addressed a local health problem, gathering data and/or working with a community group. Nearly half of the 1986 graduates had been able to bring local media attention to a health issue. CHM graduates appear to be at least as active in their communities as their counterparts nationally. VS

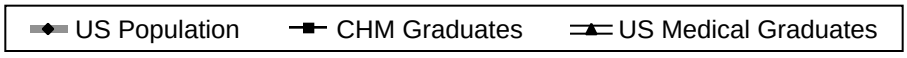
Graduates Representative of the Population: CHM in the Lead

Now Include 50% Women



Reflect Ethnic Diversity of Nation





Meeting the Primary Care Challenge:

Interviews with CHM Program Administrators

"A consensus is now emerging in the medical education community that embedding the concepts and principles of generalism in the medical school curriculum has value for the education of every medical student. The challenge for U.S. medical schools in the 21st century will be to provide all medical students with a firm generalist foundation, no matter what kind of medicine they eventually choose to practice."

Jordan Cohen, M.D., President, AAMC, October, 1996

CHM takes seriously the primary care challenge. Both Admissions and Academic Programs have adopted strategies to strengthen primary care's presence.

Admissions

The admissions office has a plan for admitting applicants with a keen interest in primary care. "First we rewrote all materials, highlighting CHM's primary care mission and describing the need for primary care practitioners and the incredible rewards which accompany this career choice," said Ms. Jane Smith, Director of Admissions. Smith and CHM Student Ambassadors travel the state informing pre-med advisors and undergraduate students of CHM's unique characteristics. The college is also developing a cognate around medical issues for MSU undergraduates.

A second strategy is to identify applicants suited for primary care. The application process secures data on relevant experiences, such as exposure to primary care mentors and work in community service. The Admissions Committee now includes four alumni in primary care practice, along with elected faculty members, some from primary care-oriented departments. The Committee reviews the applicant's primary care score in each admissions decision.

Academic Programs

Dr. Ruth Hoppe, Associate Dean for Academic Programs, described influences on the student experience in primary care. First is the powerful informal curriculum which results from the cumulative impact of faculty values and perceptions, rather than from explicit decisions by college governance. For example, although there is no mandate, the Clinical Skills Program has always been directed by a primary care physician. Generalist departments act to maintain the tradition, and to protect and reward the Director's effort. Also, primary care physicians are the majority of mentors and facilitators in Doctor-Patient Relationship instruction, so first CHM exposures to clinical faculty are most likely with generalist physicians.

Students also shape a culture that supports primary care and community involvement. Many volunteer in homeless clinics or other community support programs. From 30 to 50% of students arrange elective clinical experiences, most often supervised by primary care faculty, when the preclinical curriculum doesn't provide them.

Dr. Hoppe notes that the CHM formal curriculum offers many opportunities for primary care exposure. While the curricula of both of the other Michigan medical schools include four weeks of primary care, CHM students have twenty four weeks of primary care-oriented clerkships preceded by four weeks of Clinical Medicine in the Community (CMC). Dr. Hoppe believes the linked, "up front" primary care-related clerkships are a major accomplishment for CHM, though she acknowledges the scheduling problem for community campuses and the effort needed to create an explicit, integrated linkage across clerkships.

"basic science faculty are conscious of teaching future primary care physicians. That ... plays out in numerous, subtle and ineffable ways."

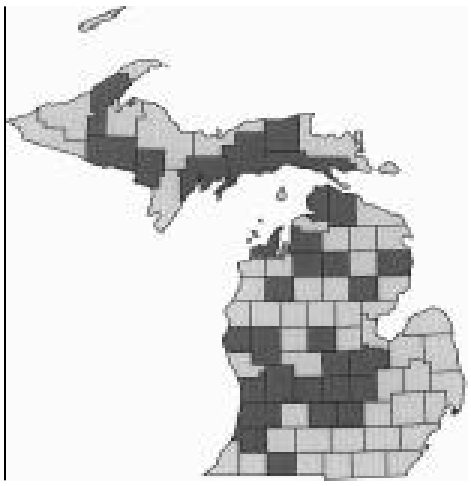
Basic science teaching also adds to the primary care emphasis. Primary care faculty help to develop the cases that structure problem-based learning (PBL). These account for much of the basic science taught. Moreover, Dr. Hoppe notes, "Our basic science faculty are conscious of teaching future primary care physicians. That awareness plays out in numerous, subtle and ineffable ways."

While CHM's goal is to educate physicians of the highest quality regardless of specialty, it is obvious that the significance of primary care is a central theme running from admissions to graduation. VS

Grads Practice in Rural Areas, Serve Underserved

When it comes to serving Michigan's underserved and providing health care in Michigan's rural counties, primary care graduates of MSU's College of Human Medicine take the college's mission seriously.

Compared to the distribution of all primary care M.D.'s in Michigan, CHM primary care graduates are more likely to practice in counties that have a higher proportion of people to physicians. Of CHM primary care graduates in Michigan, 18% practice in counties where there are more than 1000 people for each primary care M.D. Overall, only 10% of all primary care M.D.'s in Michigan practice in these areas. Findings are based on the American Medical Association report, *Physician Characteristics and Distribution in the U.S.*



CHM primary care graduates are over 3 1/2 times more likely to locate in counties designated as medically underserved areas (areas marked by lower numbers of primary care physicians caring for the poor and elderly and by high infant mortality rates). CHM graduates are also almost 1 1/2 times more likely to practice in federally designated primary care health professional shortage area, marked by difficulty of access to medical care, especially by the poor, the elderly, and commonly underserved ethnic groups.

Also, CHM primary care graduates gravitate to less populated areas within Michigan. They are twice as likely to practice in non-metro counties, with 20% located in these areas compared to 10% of all primary care M.D.'s in Michigan. Whereas the highest percentage of Michigan's primary care physicians are found in the five central counties (i.e., Wayne, Oakland, Macomb, Washtenaw, and St. Clair counties), CHM graduates are only about half as likely to practice in these counties, instead opting to practice in less densely populated areas. The dark shading on the map indicates counties in which CHM primary care graduates are located in more than twice the concentration expected.

Consistent with the emphasis by CHM on serving rural and underserved communities, graduates substantially lower the ratio of people to physicians in high-need and non-metropolitan Michigan counties, providing more people with access to health care. The College of Human Medicine was founded in part to address a shortage of physicians in rural areas, and the college's mission statement specifically addresses its commitment to providing care to people in underserved areas. CHM graduates have taken this to heart. VS

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This Issue of *VitalSigns:*