

AHSC Environmental Scan - Description of Abstracts included in the Literature Review

Sorted by year of publication

2009

2009.1 Web Site: www.cihc.ca/. Canadian interprofessional health collaborative web site of projects and information

The Canadian Interprofessional Health Collaborative web site has been developed to serve as a hub for Health Canada Interprofessional projects. The projects include the CIHC projects as well as other projects relating to interprofessional education. This web site contains the final reports of all the Canadian projects.

2009.2 Pololi L, Conrad P, Knight S, Carr, P. A Study of the Relational Aspects of the Culture of Academic Medicine. Acad Med 2009; 84:106-114

Purpose: The impact of medical school culture on medical students has been well studied, but little documentation exists regarding how medical faculty experience the culture in which they work. In an ongoing project, the National Initiative on Gender, Culture and Leadership in Medicine, the authors are investigating how the existing culture of academic medical institutions supports all faculty members' ability to function at their highest potential.

Method: The authors conducted a qualitative study of faculty in five disparate U.S. medical schools. Faculty in different career stages and diverse specialties were interviewed regarding their perceptions and experiences in academic medicine. Analysis was inductive and data driven.

Results: Relational aspects of the culture emerged as a central theme for both genders across all career categories. Positive relationships were most evident with patients and learners. Negative relational attributes among faculty and leadership included disconnection, competitive individualism, undervaluing of humanistic qualities, deprecation, disrespect, and the erosion of trust.

Conclusions: The data suggest that serious problems exist in the relational culture and that such problems may affect medical faculty vitality, professionalism, and general productivity and are linked to retention. Efforts to create and support trusting relationships in medical schools might enhance all faculty members' efforts to optimally contribute to the clinical, education, and research missions of academic medicine. Future work will document the outcomes of a five-school collaboration to facilitate change in the culture to support the productivity of all medical faculty.

2009.3 Wietecha, M, Lipstein SH, Rabkin MT. Governance of the Academic Health Center: Striking the Balance Between Service and Scholarship. Acad Med. 2009; 84:170-176

Academic health centers (AHCs) rank among the most complex organizations. Spanning the domains of university, clinical practice, hospital, and research, AHCs encompass a range of strikingly different business models, each with its own economic potential. The ability to bring these diverse enterprises actively working together has been the unique strength of the AHC as a vehicle of patient care, education, and discovery. Unfortunately, the AHC has also proved at times to be a frustrating organizational matrix of indecision wrought by different aims and distributed influence, presenting substantial challenges to the success of these institutions. The question of how best to organize the fiduciary and executive management structures of the AHC continues to be the subject of much interest to those trustees responsible for these complex institutions.

Although the question of what is the best governance model for an AHC is sometimes approached in simple terms of “one leader, or multiple,” success is more likely defined by how well other critical factors are organized and managed. These include considerations of governance, including selection and education of key trustees, their ability to access key data for their specific institution and the AHC as a whole, performance evaluation of the operating executives with respect to both specific institutional criteria and those for the AHC as a whole, and management oversight by boards across the AHC. When more than one governing body is involved, joint participation of boards and key executives is recommended for selected aspects of these processes.

2009.4 Philibert I, Can Hospital Rankings Measure Clinical and Educational Quality? Acad Med 2009;84:177-184

Background: A relative dearth of relevant data hampers efforts to demonstrate a link between educational and clinical quality and may preclude residency applicants from identifying programs with the best clinical outcomes. Existing clinical rankings could fill this gap if they are based on sound judgments about quality.

Method: To explore the potential of the U.S. News & World Report “America’s Best Hospitals” clinical rankings in measuring the quality of clinical and learning environments, the author systematically reviewed the U.S. and Canadian literature for 1975 through 2007 regarding quality indicators and teaching hospitals. Individual data elements of the rankings were examined to assess the extent to which they included accepted measures of clinical performance.

Results: A total of 187 articles met the inclusion criteria of addressing clinical quality criteria relevant to the rankings and quality assessment in teaching hospitals. Statistical examination of the data underlying the rankings and their relationship with measures of educational and clinical quality showed the rankings are largely based on institutional “prestige.” Ranked clinical programs and institutions consistently outperform counterparts on available indices, suggesting that the data elements underlying the rankings may provide valid assessments about the quality of care in educational settings.

Conclusions: Data elements in the rankings can be used to assess clinical and, to a lesser extent, educational quality, but the number of specialties and ranked institutions is too small to have a significant effect on widespread clinical or educational quality, unless ranked institutions serve as sites for the development, study, and dissemination of best practices.

2009.5 Web Site: www.aiphe.ca Accreditation of Interprofessional Health Education.

The Accreditation of Interprofessional Health Education (AIPHE) is a partnership of eight national organizations that accredit pre-licensure education for six health professions in Canada. The goal of this collaboration is to create and support the use of core joint principles/guidelines in formulating standards for interprofessional education. The Partnership, representing the disciplines of physiotherapy, occupational therapy, pharmacy, social work, nursing and medicine, will consult with a wider range of stakeholders to develop principles guidelines for use in formulating standards for their organizations and promoting their use among other stakeholders. The partnership will also share knowledge about the value of interprofessional education and best practices in program accreditation review processes. The web site includes the following report:

Environmental Scan Report: Interprofessional Education and Accreditation Processes in Pre-Licensure Health Professional Education

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There is also a *Principles and Implementation Guide*, which provides links to resources that will assist education programs to make curricular changes in support of the IPE standards.

Links to Outside Resources

- Canadian Interprofessional Health Collaborative (CIHC): www.cihc.ca
- Centre for the Advancement of Interprofessional Education (CAIPE): www.caipe.org.uk
- Collaborating Across Borders: www.cabhalifax2009.dal.ca
- Interprofessional Education for Collaborative Patient-Centred Practice (IECPCP): www.hc-sc.gc.ca/hcs-sss/hhr-rhs/strateg/interprof/index-eng.php
- Ontario Interprofessional Health Collaborative Conference 2009: www.ipeontario2009.com
- National Health Sciences Students' Association (NaHSSA): www.nahssa.ca

2009.6 Canadian Academy of Health Sciences Report Making an Impact: A preferred framework and indicators to measure returns on investment for health research. www.caahs-acss.ca

Twenty three different organizations sponsored this assessment. They all share an interest in defining the impacts of health research and learning how to improve the returns on investments in health research. Our remit from these sponsors was: Is there a “best way” (best method) to evaluate the impacts of health research in Canada, and are there “best metrics” that could be used to assess those impacts (or improve them)?

Based on our assessment, we propose a new impacts framework and a preferred menu of indicators and metrics that can be used for evaluating the returns on investment in health research.

2008

2008.1 Wartman ST, Toward a virtuous cycle: The changing face of academic health centres. *Acad Med* 2008; 83:797-799

Dr. Steven A. Wartman served as guest editor for the September 2008 issue of *Academic Medicine* and oversaw the articles describing important stories of change at 10 academic health centers in the United States. In more than 50 visits to the nation’s academic health centers during the past three years, Dr. Wartman has seen first hand the management and leadership challenges that are changing fundamentally the ways in which these organizations operate. These challenges have catalyzed a remodeling of the academic health center (AHC) from an ivory tower to a complex business enterprise that captures the power of a virtuous cycle, whereby clinical revenue and academic performance support each other by being strategically and tactically aligned. The “virtue” is that each makes the other better. In this article he puts forward **10 important concepts:**

1. *In an academic health center (AHC), research and clinical success are synergistic and interdependent.*
2. *The relationships between leaders are often the most important factor determining success or failure.*
3. *When the proverbial wolf is at the door or, at least, is seen down the lane heading your way, difficult decisions can be made with relative ease.*
4. *Many of the most important scientific problems cross disciplinary boundaries.*
5. *An AHC-wide commitment to a model of full integration has resulted in an efficient, effective, and reputation-enhancing foundation for quality and success.*
6. *A university must be administratively organized in a way that will facilitate achieving university-wide goals.*
7. *The fundamental challenge of leadership development was to get leaders to think, feel, and act as members of the same team.*

8. *Typically, incentive systems in academic medicine are designed by intuition, with insufficient attention to the large literature relevant to optimal design.*
9. *The academic missions of the AHC can be substantially advanced with the financial support that the clinical enterprise has traditionally been able to provide.*
10. *A clear response to the challenges facing the AHC community has been a distinct trend towards more “corporate” management. I have observed this transition in varying stages (depending on the particular institution). It is essentially characterized by a reorganization along nondisciplinary lines towards a management structure that, conceptually and operationally, spans the entire enterprise. This has resulted in, for example, expanded roles for individuals in existing positions (such as vice presidents for health affairs) or the creation of new roles (e.g., system-wide compliance officers or vice presidents for research) that extend beyond the individual health professions schools, along with a greater emphasis on team-oriented approaches to strategic planning, operations, and problem solving.*

2008.2 Pizzo, PA. Case Study: The Stanford University School of Medicine and Its Teaching Hospitals. Acad Med. 2008; 83:867-872

There is wide variation in the governance and organization of academic health centers (AHCs), often prompted by or associated with changes in leadership. Changes at AHCs are influenced by institutional priorities, economic factors, competing needs, and the personality and performance of leaders. No organizational model has uniform applicability, and it is important for each AHC to learn what works or does not on the basis of its experiences. This case study of the Stanford University School of Medicine and its teaching hospitals—which constitute Stanford’s AHC, the Stanford University Medical Center—reflects responses to the consequences of a failed merger of the teaching hospitals and related clinical enterprises with those of the University of California-San Francisco School of Medicine that required a new definition of institutional priorities and directions. *These were shaped by a strategic plan that helped define goals and objectives in education, research, patient care, and the necessary financial and administrative underpinnings needed.* A governance model was created that made the medical school and its two major affiliated teaching hospitals partners; this arrangement requires collaboration and coordination that is highly dependent on the shared objectives of the institutional leaders involved. The case study provides the background factors and issues that led to these changes, how they were envisioned and implemented, the current status and challenges, and some lessons learned. Although the current model is working, future changes may be needed to respond to internal and external forces and changes in leadership.

2008.3 Pomeroy C; Rice A; McGowan, W; Osburn, N. Linking Academic and Clinical Missions: UC Davis’ Integrated AHC. Acad Med 2008;83:809-815

Academic health centers (AHCs) rely on cross-subsidization of education and research programs by the clinical enterprise, but this is becoming more challenging as clinical reimbursements decline. These new realities provide an important opportunity to reevaluate the relationships between medical schools and academic medical centers.

The authors examine the benefits of *their ongoing commitment to create a fully*

integrated AHC at the University of California (UC) Davis, discussing strategies that serve as catalysts for continued growth. *They explore how investments of proceeds from the clinical enterprise directly enhance educational and research initiatives, which, in turn, increase the success of patient-care programs.* This has created a cycle of excellence that leads to an enhanced reputation for the entire health system.

One strategy involves using clinical margins to “prime the pump” in anticipation of major research initiatives, resulting in rapid increases in external research funding and academic recognition. In turn, this facilitates recruitment of high-quality faculty and staff, improving the ability to deliver expert clinical care. The overall enhanced institutional reputation positions both the clinical and academic programs for further success.

The authors posit that such approaches require executive-level commitment to a single strategic vision, unified leadership, and collaborative financial and operational decision making. Adopting such changes is not without challenges, which are discussed, but the authors suggest that an integrated AHC fosters optimized operations, enhanced reputation, and stronger performance across all mission areas. They also provide examples of how the UC Davis Health System has thus attracted philanthropists and investments from the private sector.

2008.4 Balseer J R, Baruchin, A. Science at the Interstices: An Evolution in the Academy. Acad Med. 2008;83:827-831

Biomedical science is at an evolutionary turning point. Many of the rate-limiting steps to realizing the next generation of personalized, highly targeted diagnostics and therapeutics rest at the interstices between biomedical science and the classic, university-based disciplines, such as physics, mathematics, computational science, engineering, social sciences, business, and law. *Institutes, centers, or other entities created to foster interdisciplinary science are rapidly forming to tackle these formidable challenges, but they are plagued with substantive barriers, born of traditions, processes, and culture,* which impede scientific progress and endanger success. Without a more seamless interdisciplinary framework, academic health centers will struggle to move transformative advances in technology into the foundation of biomedical science, and the equally challenging advancement of models that effectively integrate new molecular diagnostics and therapies into the business and social fabric of our population will be similarly hampered. At the same time, excess attention on rankings tied to competition for National Institutes of Health and other federal funds adversely encourages academic medical centers (AMCs) and universities to hoard, rather than share, resources effectively and efficiently. To fully realize their discovery potential, **AMCs must consider a substantive realignment relative to one another, as well as with their associated universities, as the academy looks toward innovative approaches to provide a more supportive foundation for the emergent biomedical research enterprise.** The authors discuss potential models that could serve to lower barriers to interdisciplinary science, promoting a new synergy between AMCs and their parent universities.

2008.5 Sanfilippo F, Bendapudi N, Rucci A, Schlesinger L, Strong Leadership and Teamwork Drive Culture and Performance Change: Ohio State University Medical Center 2000-2006. Acad Med. 2008; 83:845-854

Several characteristics of academic health centers have the potential to create high levels of internal conflict and misalignment that can pose significant leadership challenges.

In September 2000, the positions of Ohio State University (OSU) *senior vice president for health sciences, dean of the medical school, and the newly created position of chief executive officer of the OSU Medical Center (OSUMC)* were combined under a single leader to oversee the OSUMC. This mandate from the president and trustees was modeled after top institutions with similar structures. The leader who assumed the role was tasked with improving OSUMC's academic, clinical, and financial performance.

To achieve this goal, the senior vice president and his team employed the service value chain model of improving performance, based on the premise that leadership behavior/culture drives employee engagement/satisfaction, leading to customer satisfaction and improved organizational performance. Implementing this approach was a seven-step process: (1) selecting the right leadership team, (2) assessing the challenges and opportunities, (3) setting expectations for performance and leadership behavior, (4) aligning structures and functions, (5) engaging constituents, (6) developing leadership skills, and (7) defining strategies and tracking goals.

The OSUMC setting during this period provides an observational case study to examine how these stepwise changes, instituted by strong leadership and teamwork, were able to make and implement sound decisions that drove substantial and measurable improvements in the engagement and satisfaction of faculty and staff; the satisfaction of students and patients; and academic, clinical, and financial performance.

2008.6 Joiner K A., Libecap A, Cress A, Wormsley S et al. Supporting the Academic Mission in an Era of Constrained Resources: Approaches at the University of Arizona College of Medicine. Acad Med 2008;83:837-844

The authors describe initiatives at the University of Arizona College of Medicine to markedly expand faculty, build research along programmatic lines, and promote a new, highly integrated medical school curriculum. Accomplishing these goals in this era of declining resources is challenging. The authors describe their approaches and outcomes to date, derived from a solid theoretical framework in the management literature, to (1) *support research faculty recruitment, emphasizing return on investment, by using net present value to guide formulation of recruitment packages, (2) stimulate efficiency and growth through incentive plans, by using utility theory to optimize incentive plan design, (3) distribute resources to support programmatic growth, by allocating research space and recruitment dollars to maximize joint hires between units with shared interests, and (4) distribute resources from central administration to encourage medical student teaching, by aligning state dollars to support a new integrated organ-system based-curriculum.* Detailed measurement is followed by application of management principles, including mathematical modeling, to make projections based on the data collected. Although each of the initiatives was developed separately, they are linked functionally and financially,

and they are predicated on explicitly identifying opportunity costs for all major decisions, to achieve efficiencies while supporting growth. The overall intent is to align institutional goals in education, research, and clinical care with incentives for unit heads and individual faculty to achieve those goals, and to create a clear line of sight between expectations and rewards. Implementation is occurring in a hypothesis-driven fashion, permitting testing and refinement of the strategies.

2008.7 Wilson M, Krugman, R D. The Changing Face of Academic Health Centers: A Path Forward for the University of Colorado Denver. Acad Med. 2008; 83:855-860

This article describes a decade of major changes at an academic health center (AHC) and university. The authors describe two major changes undertaken at the University of Colorado and its AHC during the past 10 years and the effects of these changes on the organization as a whole. First, the AHC's four health professional schools and two partner hospitals were completely relocated from a space-limited urban campus to a closed Army base. The impact of that change and the management of its potential disruption of academic programs are discussed in detail. In the middle of this total relocation, the AHC campus was consolidated with a general academic campus within the University of Colorado system, compounding the challenge. The authors describe the strategies employed to implement this major consolidation, including changing the organizational structure and selecting the new name of the university-the University of Colorado Denver.

2008.8 Phillips SE, Rubenstein AH. The Changing Relationships Between Academic Health Centers and Their Universities: A Look at the University of Pennsylvania. Acad Med. 2008;83:861-866

After a period of financial losses in the University of Pennsylvania Health System stemming from a combination of internal decision making and negative external market forces, the university set out to make substantial changes in the governance and administrative organization overseeing its health system and medical school. The changes were designed to assure the university and its trustees that financial controls were strengthened and that the missions of research, education, and patient care were balanced. *The governance changes included creating a structure whereby a single administrative leader was responsible for all three missions-education, research, and clinical care- and reported directly to the president of the university.* Further, existing governing boards responsible for various entities within the school of medicine and health system were disbanded, and a new single board was created to oversee PENN Medicine, the overarching organization established in 2001 and now responsible for oversight of the University of Pennsylvania School of Medicine and the University of Pennsylvania Health System. The realignment initiated by these major changes spawned additional refinements in leadership responsibilities and process controls that, together with the new governance model, are credited with financial recovery and stronger performance in all aspects of the enterprise. These structural changes led to greater emphasis on integrating and coordinating programs to take advantage of PENN Medicine's home in a leading university.

2008.9 Barrett D J. The Evolving Organizational Structure of Academic Health Centers: The Case of the University of Florida. Acad Med 2008;83:804-808

The organizational structures of academic health centers (AHCs) vary widely, but they all exist along a continuum of integration—that is, the degree to which the academic and clinical missions operate under a single administrative and governance structure. This author provides a brief overview of the topic of AHC integration, including the pros and cons of more integrated or less integrated models. *He then traces the evolution of the University of Florida (UF) Health Science Center, which was created in the 1950s as a fully integrated AHC and which now operates under a more distributed management and governance model. Starting as a completely integrated AHC, UF's Health Science Center reached a time of maximal nonintegration (or dys-integration) in the late 1990s and at the beginning of this decade. Circumstances are now pushing the expanding clinical and academic enterprises to be more together as they face the challenges of market competition, federal research budget constraints, and reengineering clinical operations to reduce costs, enhance access, and improve quality and patient safety.* Although formal organizational integration may not be possible or appropriate for any number of legal or political reasons, the author suggests that AHCs should strive for “functional integration” to be successful in the current turbulent environment.

2008.10 Levine A S, Detre T P, McDonald M C, Roth L H, et al. The Relationship Between the University of Pittsburgh School of Medicine and the University of Pittsburgh Medical Center—A Profile in Synergy. Acad Med. 2008; 83:816-826

In the synergistic evolution of their research, educational, and clinical programs, the University of Pittsburgh (Pitt) School of Medicine (SOM) and the University of Pittsburgh Medical Center (UPMC) have followed one core principle: What is good for one is good for both. The collaboration is underpinned by UPMC's commitment to its community mission, including support for the academic and research objectives of the SOM. UPMC's conceptual origin was fostered by its experience with Western Psychiatric Institute and Clinic in the 1970s. Over time, UPMC acquired other hospitals through merger and negotiation and, by 2008, had grown into a \$7 billion global health enterprise. From the outset, the senior leaders of both UPMC and Pitt committed to collaborative decision making on all key issues. *Under this coordinated decision-making model, UPMC oversees all clinical activity, including that from a consolidated physicians' practice plan. Pitt remains the guardian of all academic priorities, particularly faculty-based research. UPMC's steady financial success underpins the model. A series of interrelated agreements formally defines the relationship between Pitt and UPMC, including shared board seats and UPMC's committed ongoing financial support of the SOM. In addition, the two institutions have jointly made research growth a priority. The payoff from this dynamic has been a steadily growing Pitt research portfolio; enhanced growth, visibility, and stature for UPMC, the SOM, and Pitt as a whole; and the sustained success of UPMC's clinical enterprise, which now has an international scope.* Given the current stagnation in the National Institutes of Health budget, the Pitt-UPMC experience may be instructive to other academic health centers.

2008.11 Sorensen A A. The Transformation of Research in the Health Professions at the University of South Carolina. Acad Med. 2008;83:832-836

During the past six years, there has been a remarkable transformation of research, faculty, and interdepartmental, interinstitutional collaboration in the health professions at the University of South Carolina (USC). The author describes the context in which this transformation has occurred and the factors that caused the USC medical school to move from a position of relative insularity from the other colleges within the university-conducting little extramural research, and regarding its relationship with its teaching hospitals as distal, associated institutions-to a position of full integration into the Division of Health Sciences with very significant growth in externally funded research and closer-than-ever-before working relationships with its two teaching hospitals. *The author hopes that the model of interinstitutional collaboration USC is developing throughout the region will be thought worthy of emulation elsewhere.*

In this article, the author reviews the transformation of research in the school of medicine and the other health professions schools-specifically, nursing, pharmacy, public health, and social work-at USC during the past six years. He explains how these changes were effected while the school continued to support its original mission.

2008.12 Hampton, T. Academic Medical Centers Embark on Public Outreach Through the Internet. JAMA 2008;300(9) 1015

Scientists have teamed up with an unlikely partner-an online video community that is more well-known for posting and sharing originally created clips of funny home videos, stupid pet tricks, and more-to engage the public and the medical community in a concerted effort to search for the causes and potential treatments for diseases.

One of the most extensive efforts is being conducted by investigators at the University of California, San Francisco (UCSF) Memory and Aging Center. To increase awareness among patients, physicians, and the general public about various degenerative brain conditions, including Alzheimer disease, frontotemporal dementia, Creutzfeldt-Jakob disease, Huntington disease, and Parkinson disease, researchers there decided to turn to a venue that already attracts millions of viewers per day, the video-sharing Web site YouTube, to create *the UCSF YouTube channel (<http://www.youtube.com/UCSFMemoryandAging>).* *The goals of this venture include promoting earlier diagnoses, enlisting more patients in clinical trials, and providing information and support to the caregivers of patients with these conditions.*

Other medical centers, including those at Stanford University, Duke University, and the University of Wisconsin, have created similar outreach efforts on the Internet as well.

2008.13 DiLaura R. "Use of informatics and information technologies in the clinical research enterprise within US academic medical centers: progress and challenges from 2005 to 2007." Journal of investigative medicine 56.5 (2008):770-9.

Background: Data on the state of information systems infrastructures used in the clinical research enterprise of academic medical centers are limited and mostly anecdotal. What

has been published is slowly beginning to make important distinctions, such as clinical trials as a specialized form of clinical research and between “Informatics” in an academic setting from health care information technology. However, this field continues to undergo fundamental changes, accelerated by the National Institutes of Health’s creation of Clinical and Translational Science Awards to build a new “home” for biomedical research.

Methods: We surveyed all Clinical Research Forum member institutions regarding their enterprise infrastructure and use of information systems in support of clinical research. The questions in this on-line study expanded on one first done in 2005. Of the 52 sites invited, 19 (37%) responded. We analyzed the responses and also made matched comparisons for those organizations that participated in both surveys.

Results: Although there continues to be conceptual agreement on information system elements for the clinical research enterprise, no single institution achieved the ideal, a similar result to the 2005 survey. Indeed, little progress was made over the past 2 years at most locations other than in information technology planning, strategy, and governance.

Conclusions: *There is increased recognition of the importance of information systems infrastructure and expertise for biomedical research, but the needs are accelerating much faster than institutions can build or pay for. A much greater realization of and innovative solution for this growing chasm is urgently required.*

2008.14 Aaraas IJ. Swensen E. National Centre of Rural Medicine in Norway: a bridge from rural practice to the academy. [Journal Article] Rural & Remote Health. 8(2):948, 2008 Apr-Jun.UI: 18557698

Rural medical practice in Norway has an honourable 400 year history, but this has diminished since the end of World War II. Despite official intention to support a decentralised population, rural and remote populations have continuously reduced in Norway over the last 10 years. A consequence of the accompanying reduction in rural and remote GP services has been a distinct reduction in opportunities for medical student and intern placements. In 1999 the University of Tromsø implemented some projects to stimulate rural medical practice, funded by the government. *This culminated in the 2007 foundation of the Norwegian National Centre of Rural Medicine (NCRM) in Tromsø.*

Issue: *A key challenge of the NCRM is to identify factors that influence young doctors to choose rural careers.* This is reflected in the three concurrent aims or perspectives of the NCRM: (1) to bridge the gap between the academy and rural medical practice (the principal perspective); (2) to promote research, education and networking among rural health professionals (the operational perspective); and (3) to contribute to the recruitment, stability and quality of rural health care (the political perspective).

Lessons Learned: The NCRM has had a number of achievements that include a publication that provides a narrative perspective on rural practice, the role of the rural doctor, and how rural culture and context influence proper clinical decision-making. Another achievement is a professional development and research program that has been successful in fostering a number of major studies, and led to the formation of a supportive PhD research group. The NCRM has also facilitated networking between rural practitioners and academics, at conferences and via its rural doctor website, and promoted cooperative international

activities. In these ways the NCRM has fostered the transformation of rural doctors' experience into theory to enhance medical knowledge, begun to redress the balance between community- and hospital-based services, and so made a favourable start to building a bridge between rural practice and the medical academy in Norway.

2008.15 Andrea Manyon, MD, Joseph Hobbs, Community faculty: caught between the Dean's office, the Academic Health Centers and the fiscal realities of primary care. Ann Fam Med 2008:378-379. (378 PDF) – entire article

Many departments of family medicine are at the threshold of a possible new beginning in undergraduate medical education—a beginning that will provide medical school leaders new opportunities to address anticipated physician workforce shortages and “rightbalance” physician specialty and geographic distribution using innovations in curriculum and national testing standards to achieve these changes. This new beginning will usher in expansion of medical schools' class size as well as the establishment of new medical campuses and schools. This increase in medical school class size will require academic departments of family medicine to expand and reinforce the distributed community-based (and largely volunteer) physician faculty. These community practices provide learning opportunities for students in family medicine clerkships and often “Introduction to Clinical Medicine” courses. Many of the current family medicine community faculty teaching sites already experience “learner-saturation” not only from family medicine clerkship students, but with students from PA, Nursing, Osteopathic, and international schools competing for community clinical teaching placements. Academic departments of family medicine are challenged to maintain and now likely rapidly expand this decentralized model of clinical education. These proposed expansions raise several questions. First, can clinical teaching volunteerism support the magnitude of planned medical school expansion? Second, once voluntary teaching capacity of community faculty is exceeded, can additional capacity be financed with departmental resources? And finally, if departmental resources are inadequate, are medical schools prepared to further support the teaching involvement and necessary educational resources for community faculty? These are questions that many departments are facing or will be facing very soon. The educational model that was first established by family medicine and now used by other primary care departments rests on the tenuous volunteerism of community faculty at a time when primary care practice resources are stressed and volunteerism often is expected by leaders of medical schools and legislators who support these initiatives. Amid medical school expansion, family medicine educators also strive to standardize the community-based learning experience, to conduct meaningful evaluations and to embrace learning within practices that meet the expectations of a patient-centered medical home. The creation of this practice environment is a challenging undertaking for all clinical venues. The requirement of this new practice concept in community-based learning sites will likely decrease access to existing and new community teaching opportunities. We must also ask whether we should expect all community-based teaching sites to accomplish what academic family medicine practices have not yet consistently done. *These challenges set the stage for a new model of community-based learning: community faculty potentially compensated for teaching who are members of a learning community in partnership with the academic department and for whom the departments serve as political and educational advocates, quality improvement assistants and providers of continuing medical education. In this new*

model of community-based learning, the presence of students could potentially be “value-added” for community and academic practices. Value is provided by facilitation of: Performance in Practice Modules as required for maintenance of certification, meaningful “bubble-up” research ideas by community faculty, academic appointments and benefits, and vigorous advocacy with payors and legislators for the appropriate fiscal advancement of primary care and enhanced reimbursement for practices embracing concepts of the patient-centered medical homes and teaching students. It is now time to collect and share best practices that advance the partnership between academic departments of family medicine and community faculty. Collectively we may be able to answer the following critical questions that may be necessary for departments to appropriately respond to this new academic challenge. What are the most successful incentives? What are the best models for faculty development?

How can we enhance the learning experiences of community faculty? What is required to facilitate meaningful promotion and advancement for community faculty? How do we select and maintain community faculty committed to the institution’s educational mission?

New models of family medicine department/community partnerships will produce educational innovations that include greater identification of appropriate community faculty as equal academic colleagues worthy of additional investments from the department and schools of medicine. Consider the quantitative impact of integrating the estimated 10,000 community faculty (extrapolating from a query of ADFM members in 2004 concerning the number of community faculty) into our departments as partners in the mission of advancing the future of our discipline. Sharing best practices related to relationships with our distributed community faculty across the country will facilitate the development of appropriate responses to the unique opportunities afforded by the changing medical school environment.

The authors thank Linda French, MD, Maryjean Schenk, MD, and Martha McGrew, MD, for their contributions. Andrea Manyon, MD, Joseph Hobbs, MD, and the Association of Departments of Family Medicine

2008.16 Schweitzer L, Eells TD. The Forgotten Faculty: Challenges for Ph.D.s in Clinical Medical School Departments. J Clin Psychol Med Settings (2008) 15:7-11

The data and discussion contained in this invited paper are based on the opening plenary by the first author whose paper titled “The Status of Ph.D.s in US Medical Schools” was presented at the 3rd national conference of the Association of Psychologists in Academic Health Centers, Minneapolis, MN, May 2007. The significant growth of the number of Ph.D.s in clinical departments is described, as is their distribution. The roles they play; the barriers they face in terms of leadership opportunities, promotion and tenure; and the concerns they voice that are specific to this population are also discussed. Salary differentials between Ph.D.s on main and medical school campuses are provided. Recommendations for future investigation of disparate treatment and for faculty development opportunities specifically aimed at this group are found at the conclusion of the paper. (PDF fulltext)

2008.17 Baron, RJ, Medicine cut off from its roots: Context matters in medical education. Health Affairs. 2008 Project HOPE. 27:1357-1361

The values and rewards that animate community practice are not clearly visible to those in traditional medical training programs. Flexnerian education explicitly chose to exclude practitioners in favor of full-time faculties. *Academic health centers today are organized to take maximum advantage of a reimbursement system that has been described as perverse; perhaps one of the perversities is that the values embedded in the reimbursement system (reimbursement driven by discrete services rather than overall health or function) have been internalized by trainees and their institutions, and other things valuable to patients and communities (longitudinal care, coordinated care, and appropriateness of care) have become invisible.* Copyright 2008 Project HOPE-The People-to-People Health Foundation, Inc.

2008.18 Piwowar H.A. Becich M.J. Bilofsky H. Crowley R.S. Towards a data sharing culture: Recommendations for leadership from academic health centers. PLoS Medicine. Public Library of Science. 2008;5:1315-1319

Recommendations for Academic Health Centers to Encourage Data Sharing

1. **Commit** to sharing research data as openly as possible, given privacy constraints. Streamline IRB, technology transfer, and information technology policies and procedures accordingly.
2. **Recognize** data sharing contributions in hiring and promotion decisions, perhaps as a bonus to a publication's impact factor. Use concrete metrics when available.
3. **Educate** trainees and current investigators on responsible data sharing and reuse practices through class work, mentorship, and professional development. Promote a framework for deciding upon appropriate data sharing mechanisms.
4. Encourage data sharing practices as part of **publication policies**. Lobby for explicit and enforceable policies in journal and conference instructions, to both authors and peer reviewers.
5. Encourage data sharing plans as part of **funding policies**. Lobby for appropriate data sharing requirements by funders, and recommend that they assess a proposal's data sharing plan as part of its scientific contribution.
6. **Fund** the costs of data sharing, support for repositories, adoption of sharing infrastructure and metrics, and research into best practices through federal grants and AHC funds.
7. **Publish** experiences in data sharing to facilitate the exchange of best practices.

2008.19 Levine SA, Saxton JWF, Johns MME. Viewpoint: Developing integrated clinical programs: It's what academic health centers should do better than anyone. So why don't they? Acad Med 2008;83:59-65

Few would dispute that health care should be provided in seamless, well-integrated clinical care environments that bring together the various disciplines needed to provide patient-centered care, to educate trainees, and to conduct research into a particular disease or episode of care. Yet there are relatively few examples of successful or sustained clinical integration, either in the community setting or in academic health centers (AHCs). The authors draw on their experience with several AHCs and other health care settings to address why AHCs have not made better progress in *developing integrated centers of clinical care*. They characterize two fundamental types of integration that have evolved within the AHC setting: lateral and vertical. Lateral integration tends to occur among similarly situated specialties. It is easier to accomplish and far more common than is vertical integration, which brings together most, if not all, of the professionals and staff necessary to treat or manage many medical conditions and health problems. The vast majority of examples of clinical integration, whether lateral or vertical, fail to integrate essential administrative and financial functions, which has significant consequences for the ability of either laterally or vertically integrated centers to provide seamless, patient-centered care. *The authors identify the emergence of several new examples of vertical clinical integration that also integrate administrative and financial functions as models for AHCs to follow and derive lessons and recommendations concerning how AHCs and others can address the cultural, financial, and governance issues that continue to limit the development of vertically integrated, patient-centered care.* Copyright 2008 Association of American Medical Colleges.

2008.20 Council for Science & Technology UK. How academia and government can work together. 2008 Oct. Council for Science and Technology Kingsgate House, 66-74 Victoria Street London SW1E 6SW +44 (0)20 3300 8510 cstinfo@dius.gsi.gov.uk www.cst.gov.uk

Executive Summary:

A healthy engagement between academics and policy makers is essential to the provision of informed, evidence based, world-class policy making. Academics already play a key part throughout the policy making process, providing advice on a huge number of topics to recipients at all levels of Government. The diversity of the UK's world-class academic expertise means that it is a formidable resource for policy-makers in the UK. By engaging with policy makers academics become involved in answering some of the most challenging questions faced by the UK, and their ideas contribute to national policy. Our investigation has shown that the engagement between academics and policy makers in the UK is not as strong as it might be. A great deal of goodwill exists on both sides and strides have been taken in recent years to strengthen engagement: in particular through the introduction of Departmental Chief Scientific Advisers and Scientific Advisory Councils, and clear commitments by Government to evidence-based policy. Despite this CST has identified areas on both sides where improvements clearly can and should be made.

The UK position is not unique: most countries have difficulties in balancing the relationship between academics and policy-makers. Even where parts of the engagement seem superior in other countries it is often because the political systems are different. For example, the greater flow of academics to and from Government in the US is at least in part due to the absence of a permanent civil service. There are strong parallels between the effort by academics to improve their engagement with Government and the successful transformation of academic engagement with business in recent years, and it is important that the lessons are learned. It is clear that from the discussions we had that there are strong opinions on how to improve Government and academia engagement. The relationship is complex; rather than attempt to list every issue and potential solution we have sought to meet the challenges set by a number of those we talked to: first, to highlight the key inhibitors to good Government/academia engagement, and then to suggest a core set of sustainable actions we believe both sides need to take to improve that engagement. We have identified the following key inhibitors to engagement:

- Less than professional working relationships
- Ignorance on both sides of what good engagement can deliver
- A degree of mistrust between academics and policy makers
- Failure to value the relationship

We recommend Government and academia take action in three areas:

1. Build relationships and communication

Core recommendation to Government and academia: Government departments, Universities, Research Councils and Learned Societies need to work collectively to identify and create a set of exchange mechanisms, including world- class internship and secondment schemes, and promulgate them widely.

2. Build capacity to ensure a more productive engagement

Core recommendation to Government: Mechanisms need to be put in place to further empower Departmental Chief Scientific Advisers (DCSAs), Scientific Advisory Councils (SA Councils) and Heads of Analysis to act as the core conduits for capacity building between academia and Government, in particular by ensuring:

- i. Sufficient access to Ministers
- ii. Buy-in from Ministers to setting up SA Councils
- iii. Wider advertising within the academic community of these bodies

Core recommendation to Academia: Universities should seek to improve and professionalise their capabilities and structures for engaging with Government so that they operate more like consultancy organisations, in particular by:

- i. Building on their experience of working with business, including concepts such as relationship managers
- ii. Considering whether new structures within the university itself might be needed
- iii. Utilising appropriate funding sources

3. Rate, value and reward the engagement

Core recommendation to Government: Identify criteria to assess quality within the major categories of academic engagement with Government; and identify mechanisms to incentivise each category, in particular:

- i. Through the RAE and its successor for publishable outputs
- ii. By setting up peer review bodies within Government (jointly with academia) that are capable of assessing both the academic quality of the paper, and its quality and impact in terms of policy making
- iii. By investigating whether a more flexible approach could be taken within the RAE/ REF so that policy papers could be submitted and assessed both in terms of academic quality and policy value to Government, with appropriate safeguards
- iv. By developing a ‘gold standard’ acknowledgement from Government for valued engagement, where this involves non-research and non-publishable outcomes, that could be sent to an academic’s institution and the relevant Research Council.

Core recommendation to Academia: Recognise and reward engagement with Government through academic career development, in particular:

- i. By rewarding quality in non-research and non-publishable engagements between academia and Government through career progression in the same ways that traditional academic research excellence is rewarded.

CST also believes that Government should make greater use of bodies such as the Learned Societies, Research Councils and the independent bodies such as the CST, all of which have strong academic links and provide another valuable source of external academic capacity.

The desired outcomes of these recommendations will be:

- A culture change leading to greater clarity in the relationship, better interaction, mutual understanding and a more coherent relationship between academia, Government and professional bodies
- A more professional, innovative and effective relationship between academia and Government with agreement of where and how to build the necessary capacity
- Government-academia engagement being seen as career developing on both sides due to the mechanisms to value and reward the interaction.

CST believes that by implementing these core recommendations Government and academia will have taken major steps to improve engagement. CST intends to conduct a further study in twelve to eighteen months time to investigate what progress has been made against these recommendations, and will report its findings to Government.

2008.21 Greeson JM, Rosenzweig S, Halbert SC, Cantor IS, Keener MT, Brainard GC. Integrative medicine research at an academic medical center: Patient characteristics and health-related quality-of-life outcomes *Jr Altern & Compl Med* 2008;14:763-767

Objective: To characterize patients seeking care at a university-based integrative medicine practice, and to assess short-term changes in health-related quality of life (HRQoL) associated with integrative medical treatment.

Design: Prospective, observational study.

Setting: This study was conducted at a large U.S. academic medical center affiliated with the Consortium of Academic Health Centers for Integrative Medicine.

Participants: Seven hundred and sixty-three (763) new patients with diverse medical conditions participated in the study. Mean age was 49 years (standard deviation = 16, range = 14-93). Two thirds of patients were women and three quarters were white. The most common International Classification of Diseases 9th Revision medical diagnoses were malaise and fatigue, myalgia and myositis, allergy, anxiety or depression, hypertension, malignant neoplasm of the breast, lumbago, and irritable bowel disease. Over half the sample had two or more comorbid medical conditions.

Outcome Measure: The Medical Outcomes Study 36-item Short-Form (SF-36) health survey was used to measure HRQoL at initial assessment and 3-months following integrative medicine consultation.

Results: Baseline SF-36 scores fell below the 25th percentile, indicating substantially compromised HRQoL. Physician-prescribed treatment modalities included anthroposophical medicine, nutritional medicine, Western herbs, homeopathy, nutritional counseling, and acupuncture. Three (3) month follow-up assessment revealed statistically significant improvements on all eight SF-36 subscales among survey respondents. HRQoL effect sizes ranged from 0.17 (Physical Functioning) to 0.41 (Social Functioning), with a mean of 0.30. HRQoL effects were consistent among demographic subgroups.

Conclusions: Integrative medical treatment at a university-based center is associated with significant increases in HRQoL for a medically diverse population with substantial comorbidity and functional limitations. Controlled studies that measure HRQoL and additional outcomes related to whole person health—physical, mental, social, and spiritual—are needed to determine the full therapeutic potential of integrative medicine, and to determine efficacy and cost-effectiveness relative to conventional medical care.

2008.22 Assoc Academic Health Centers Out of Order, Out of Time: The state of the nation's health workforce. AAHC Report 2008 ISBN: 978-0-9817378-0-5 (PDF Full Report)

Executive Summary:

Out of Order, Out of Time: The State of the Nation's Health Workforce is a report undertaken by the Association of Academic Health Centers to focus attention on the critical need for a new, collaborative, coordinated national health workforce planning initiative.

The report is based on the following premises:

- The dysfunction in public and private health workforce policy and infrastructure is an outgrowth of decentralized decision-making in health workforce education, planning, development and policymaking (out of order);
- The costs and consequences of our collective failure to act effectively are accelerating due to looming socioeconomic forces that leave no time for further delay (out of time);
- Cross-cutting challenges that transcend geographical and professional boundaries require an integrated and comprehensive national policy to implement effective solutions;
- The issues and problems outlined in the report have not been effectively addressed to date because of the inability of policymakers at all levels to break free from the historic incremental, piecemeal approaches; and
- Despite many challenges, the prospects for positive change are high.

The report presents findings, conclusions and recommendations. The detailed findings are discussed in seven chapters:

- Chapter One reviews the historic evolution of health workforce policy and considers how the decentralization of health workforce policymaking among numerous public and private entities limits their collective ability to address national needs in an integrated, comprehensive, and effective manner.
- Chapter Two considers some of the specific problems arising from the lack of an integrative role in current public policymaking and infrastructure, including poor harmonization of policy within and across jurisdictions, the barriers to other stakeholders' ability to bridge those divides, and the consequences of the failure to create shared taxonomies and coordinated research capabilities.

- Chapter Three examines specific policy areas where lack of harmonization of various public and private standards and requirements is problematic, including scope of practice laws, licensure and accreditation.
- Chapter Four investigates how health labor markets are adversely affected by dissatisfaction with jobs and work environment as well as the limited success of recruitment and retention strategies. It also discusses how market incentives, increased debt, and other financial concerns contribute to suboptimal supply and distribution of the health labor force.
- Chapter Five scrutinizes the challenges facing institutions responsible for health workforce education and training, including constrained resources, adverse impact of elevation of minimum credentials, persistent faculty shortages, the consequences of increased entrepreneurialism and privatization in health workforce education, and the unrealized promise of mainstreamed interprofessional education and practice.
- Chapter Six explores increasing reliance on a mobile international health workforce, the economic and individual choices at issue, and the need to evaluate and plan from a national perspective.
- Chapter Seven delves into the socioeconomic trends accelerating health workforce challenges, such as increased demand attributable to aging baby boomers and decreased supply attributable to the looming retirements of baby boom generation practitioners, as well as the changing values and perceptions that accompany changing demographics of the health workforce, and the health professions' ongoing struggle to respond to demographic diversity.

The report draws several broad conclusions from the detailed findings:

- A broader, more integrated national strategic vision than that which has characterized our historic approach to health workforce policymaking and planning is needed if complex and urgent health workforce issues are to be addressed effectively.
- A mechanism is needed to serve the currently unfilled integrative role that existing health workforce policymaking and planning processes are not designed, and are ill-equipped, to serve.
- National health workforce policy priorities include:
 - Assessing and harmonizing health workforce laws, standards, and requirements to improve their effectiveness and to remove the arbitrary barriers and burdens that the lack of consistency and compatibility creates;
 - Developing innovative policies and strategies that counteract the economic and environmental factors discouraging pursuit of health professions careers at a time when the nation is already facing current and projected shortages in many health professions;

- Developing innovative policies and strategies that address the economic and environmental factors obstructing access to health professions education, burdening educational institutions, and distorting health workforce objectives; and
- Developing a national approach to global health workforce issues.
- It is critically important to act immediately to develop and implement an integrated, comprehensive national health workforce policy before intensifying health workforce needs outpace available resources, putting the U.S. at risk of losing its status as the global health care leader.

The report's findings and conclusions offer compelling arguments that we are out of time to address what is out of order in our health workforce. Therefore, the report recommends that all public and private stakeholders work together to:

- Make the U.S. health workforce a priority domestic policy issue;
- Begin addressing national health workforce issues immediately to avert crises in national workforce capacity and infrastructure;
- Develop an integrated, comprehensive national health workforce policy that recognizes and compensates for the inherent weaknesses and vulnerabilities of current decentralized multi-stakeholder decision-making; and
- Create a national health workforce planning body that engages diverse federal, state, public and private stakeholders with a mission to:
 - Articulate a national workforce agenda;
 - Promote harmonization in public and private standards, requirements and prevailing practices across jurisdictions;
 - Address access to the health professions and the ability of educational institutions to respond to economic, social, and environmental factors that impact the workforce; and
 - Identify and address unintended adverse interactions among public and private policies, standards, and requirements.

The report includes additional recommendations for fulfilling each of these missions.

The Association of Academic Health Centers is a non-profit organization based in Washington, DC that represents the nation's academic health centers and seeks to advance the nation's health and well-being through leadership in health professions education, patient care, and research. Out of Order, Out of Time: The State of the Nation's Health Workforce is a product of the AAHC's recent initiative to analyze health workforce shortage issues from a broad multi-professional perspective and was supported in part by a grant from the Josiah Macy, Jr., Foundation.*

The report is based on a review of health workforce literature, as well as information gathered during a series of forums and workshops with health workforce experts, analysts, and representatives of major educational and healthcare organizations, and from AAHC staff interviews with select academic health center CEOs.

2008.23 Can Academic Health Org. Leaders Forum. Academic Healthcare in a Changing World: Positioning for Success UK – Canada Academic Healthcare Leaders’ Forum 15 May 2008 www.chms.ac.uk/documents

A Summary Report

Introduction

The objective of this forum was to bring together Chief Executives and Deans for a dynamic exchange of information, ideas and experience on critical issues that will impact the future of University Hospitals, Medical Schools and the broader health care system. The forum was supported by the Association of UK University Hospitals, the Medical Schools Council and the Association of Canadian Academic Healthcare Organizations, and sponsored in part by Medtronic.

In the United States the Association of Academic Health Centers (AAHC) defines and Academic Health Science Centre as: ‘...accredited, degree granting institutions of higher education and consist of an allopathic or osteopathic medical school, at least one other health professions school or program (such as allied health, dentistry, graduate studies, nursing, pharmacy, psychology, public health veterinary medicine) and one or more owned or affiliated teaching hospitals, health systems or other organized health care services.’ A broad definition of Academic Health Science Centres like this one allows for considerable scope for local interpretation and implementation of these collaborative structures. In the UK, this scope translates as a wide range of opportunities for levels of collaborative working between Medical Schools, NHS Trusts and Primary Care.

Sir John Tooke, Chair of the Medical Schools Council reflected at the close of the forum that four themes emerged from a stimulating set of discussions on the issue of Academic Health Science Centres, and these were: vision, translation, opportunities and next steps. The outcomes of the forum are considered below in relation to these themes.

Vision

Academic Health Science Centres exist in the context of the tri-partite agenda of education, clinical care and research and benefit from having a coherent vision and long-term planning. In his keynote address, Victor Dzau gave a compelling vision of the potential of Academic Health Centres, drawing on the experience of Duke. The translational continuum which such Centres could exploit was elegantly described. Duke Medicine, due to its advantaged position as an Academic Health Science Centre, is able to reduce the time it takes for a discovery to be translated into global health practice from over 20 years to less than ten years. This acceleration of the innovation-care continuum is a central benefit to both the research agenda and the clinical care agenda.

It was clear from discussion that the innovation-care continuum was not simply a linear process from bench to bedside, and should extend to influencing policy and commissioning. Furthermore the continuum needed to embrace broader societal and global dimensions of healthcare and health research. This 'second transition' from bedside to the local, national and global populations should be served early on by proper involvement of Primary Health Care in the development of a shared vision, and later by applied research involving Primary Health Care Centres.

Steve Smith explained the vision behind Imperial's Academic Health Science Centre as being aimed at helping elevate the UK's standing internationally in the areas of innovation in health research, patient outcomes and patient satisfaction. The discussions highlighted the distinction between innovation and clinical excellence, where innovation represents the 'new and not necessarily the 'excellent', and that ideally innovation should feed into clinical excellence. It is in this way that innovation can be seen to benefit the full extent of clinical care including patient experience as well as research.

Academic Health Science Centres are in an optimum position for driving innovation and research as they are less constrained by targets and markets, are able to identify unmet health needs and have access to a patient population and biological materials. Sir John Savill appealed directly to the Chief Executives by highlighting how investing in research and development can benefit the Trust. A strong research and development portfolio serves to boost an institution's reputation, attracts funding, provides opportunities for teaching and training to draw on cutting edge research and facilitates recruitment and retention by attracting new and attractive career pathways across professions.

The Forum considered the barriers to translating such visions. The difficulties associated with aligning distinct management and HR structures were emphasised, including the stifling impact of bureaucracy that potentially stems from two complex organisations working together. Managing balance between thematic science and clinical structures was also seen as a challenge to effective translation. In the UK it was questioned whether Foundation Trust governance arrangements impeded full academic engagement.

In overcoming barriers, the need for shared vision and bilateral understanding was clear. Where aligning structures was seen as problematic, partnership working was suggested in place of aggressive restructuring. It was repeatedly acknowledged that financial incentives and shared funding could drive collaboration rather than centrally dictated structural solutions. Canadian colleagues pointed out the advantage of demonstrating the economic dividends that could flow from such Centres as a means of generating support. Translation was also facilitated by effective measurement and performance management. The metrics needed to reflect the multifaceted mission of the partnership and should evolve as the partnership matured.

An important pre-requisite and consequence of effective translation was the creation of a culture that fuelled success. The culture was seen as the emergent key property that was created from the development of profound relationships fostered in the pursuit of a shared vision. Competitiveness was seen as important, as was the creation of role models and champions and indeed championing success. The dependence of a collaborative culture upon positive and productive personal relationships was repeatedly emphasized.

Opportunities

A consensus of the meeting was that Academic Health partnerships were at a particularly critical point with many exciting opportunities opening up. Those opportunities were particular to organisations' particular environments. It was proposed that regional clusters of institutions in England could develop partnerships similar to those in Scotland as described by John Savill. It was noted that Connecting for Health in England promise to deliver the benefits already in evidence soon after electronic record linkage was established in Scotland.

Opportunities for partnerships should be explored at a local level, not just between Medical Schools and Secondary care but with Primary Care and industry also. NIHR Collaborations for Leadership in Applied Health Research and Care (CLAHRCs) offer a real opportunity to exploit the full innovation care continuum in the UK.

Next Steps

The meeting pointed out the great value of sharing experience and particularly the international comparisons in progressing this issue. It will remain high on the agenda of the Medical Schools Council and the Association of UK University Hospitals and indeed is probably the single most important agenda item in which the two bodies are engaged. The overwhelming consensus from the meeting was that there was a need for a plurality of models of Academic Health Centres and that form needed to follow function which follows purpose. The precise purpose of the Academic partnership would reflect the local context and opportunities. The UK delegates supported the use of this summary to make clear to government and other constituencies the value of such enterprises.

2008.24 George S. UK public health research centres of excellence. Jr Public Health 2008;30:351-352

Steve George - University of Southampton Clinical Trials Unit

Academic public health, and public health research, has had a hard time in the UK in the last few years. Following the disappearance of Regional responsive mode research funding in 2001, researchers in public health and health services research faced either the daunting prospect of applying to the MRC or waiting for a commissioned project to be offered that fitted, even if only broadly, with the subject they wanted to undertake research into. The Faculty of Public Health survey of the specialist public health workforce in 2005 showed that the numbers in academic public health had declined by 53.3% since 2003.¹ The large bulk of this fall was accounted for by reduced numbers of specialist registrars in academic training slots, and this was backed up by data from the Council of Heads of Medical Schools. This point was acknowledged by both Modernising Medical Careers and the UK Clinical Research Collaboration (UKCRC), in their 2006 recommendations leading to the introduction of Walport Fellowships, intended to solve the problems of training academics in medical specialties.² These fellowships, however, have had only limited success in Public Health. Public Health has now been a multi-disciplinary specialty for some years, and Walport Fellowships are not applicable to registrars coming from a background other than medicine. Also, Public Health, traditionally, has been a late-entry specialty, and the combination of new medical training pathways, and the fact that the Walport path has to be selected prior

to entering a specialty, means that many prospective applicants have had no exposure to the different areas of Public Health while the opportunity to enter academic public health is open to them. The announcement by UKCRC in January 2008 that £20M was to be put into the setting up of a number of Public Health Research Centres of Excellence across the UK was therefore welcomed. The list of funders of this initiative is impressive, and includes many organizations previously thought of as purely clinically orientated. The extension of these institutions into funding of public health research is very welcome indeed.

The brief for those wishing to apply specified three priority areas for research; diet and nutrition, physical activity, and alcohol, tobacco and drugs. The choice of these three areas suggested to many that this initiative was concerned solely with changing behaviour in individuals and, in the context of UK health policy over the last two decades, this would not be surprising. Placing the responsibility for health upon the individual removes from a government the necessity to provide things that really might have an effect on health, like affordable housing and public transport, and allows it to spend money instead on expensive IT systems that allow digital X-rays to be sent to GPs who have never been trained to read them, and ID cards. Thankfully, neither UKCRC nor the five successful centres have seen it that way, and all five have managed to incorporate into their remit elements of investigation into the social and macro-economic issues that affect behaviour and public health. Neither have they forgotten their role in capacity building and training the researchers of the future. Also included in the portfolio of these centres is work with practitioners and policy makers. This will go some way to alleviating the gap, perceived by many, between those 'on the front line' in public health, and those in academic centres.

However, to balance the optimism we should exercise a little cynicism. Should 'training the researchers of the future' be re-phrased 'training some of the researchers of the future?' It would be easy for governments to think that their job, in terms of training public health academics, was now done. But, even taking into account the social and economic perspectives that underlie obesity and alcohol and drug misuse, the gamut of academic public health is nowhere near covered. What about the aetiological epidemiology of diseases not specified in this package, or health services research, or communicable diseases, or the environment in general and its effects on health? It is clear that not all training will take place in these centres of public health excellence, and provision for training academics in other areas needs to be made. Also, working with policy makers is one thing, but policy makers always have the option to decide how much they wish to heed the messages that they are given. We are well enough used to 'policy-based evidence' to be aware of that.³

So what's the verdict? Overall, this must be a welcome initiative in terms of public health research and the next generation of researchers. But it is not everything that is needed. Public Health is a broad specialty, and there are many researchers and young would-be Public Health academics who will not fit into the subject areas of these centres. Other areas of public health researches need to be funded, and the existence of these centres may induce some complacency in those with a responsibility to fund them. But perhaps I should end with the message of a BMA conference to discuss 'Delivering Academic Medicine', following a speech by Mark Walport about the way forward:

‘Be pleased, sing for these changes and then they will happen and they will improve; grumble about them, and the politicians will use it as an excuse to put the money into something else. So act as if your cup’s half full, even if it doesn’t seem that way.’⁴

1. Gray S, Sandberg E. The Specialist Public Health Workforce in the UK 2005 Survey. A Report for the Board of the Faculty of Public Health (2006) London: Faculty of Public Health.
2. Medically- and dentally-qualified academic staff: Recommendations for training the researchers and educators of the future. Report of the Academic Careers Sub-Committee of Modernising Medical Careers and the UK Clinical Research Collaboration. (2005) London, UK: Clinical Research Collaboration and Modernising Medical Careers.
3. Marmot MG. Evidence based policy or policy based evidence? Br Med J (2004) 328:906–7.[Free Full Text]

2008.25 Toner M, Tompkins R. INVENTION, INNOVATION, ENTREPRENEURSHIP IN ACADEMIC MEDICAL CENTERS. Surgery 2008;143:168-171

The potential for academic centers to achieve in health care what physical sciences have accomplished over the last century in entrepreneurship may be one of the most exciting opportunities in the 21st century. There is an ever-growing role for academic medical centers in innovation and the development of new devices, drugs, and applications. It is arguable that the innovation is essential in academic medical centers given the tremendous investment to these institutions by the public via various federal agencies as well as private philanthropy. Moreover, the role of academic medical centers is not only to take care of patients but also to advance health care by bringing these innovations to the bedside. The process of innovation that exists between invention and commercialization (application) is thus central to the mandate of academic medical centers and needs to be properly incorporated into the intellectual and ethical fabric of academic medical centers.

2007

2007.1 Arora S; Geppert, CMA, Kalishman S, Dion D et al. Academic Health Center Management of Chronic Diseases through Knowledge Networks: Project ECHO. Acad, Med 2007; 82:154-160

The authors describe an innovative academic health center (AHC)-led program of health care delivery and clinical education for the management of complex, common, and chronic diseases in underserved areas, using hepatitis C virus (HCV) as a model. The program, based at the University of New Mexico School of Medicine, represents a paradigm shift in thinking and funding for the threefold mission of AHCs, moving from traditional fee-for-service models to public health funding of knowledge networks. This program, Project Extension for Community Health care Outcomes (ECHO), involves a partnership of academic medicine, public health offices, corrections departments, and rural community clinics dedicated to providing best practices and protocol-driven health care in rural areas. Telemedicine and Internet connections enable specialists in the program to comanage

patients with complex diseases, using case-based knowledge networks and learning loops. Project ECHO partners (nurse practitioners, primary care physicians, physician assistants, and pharmacists) present HCV-positive patients during weekly two-hour telemedicine clinics using a standardized, case-based format that includes discussion of history, physical examination, test results, treatment complications, and psychiatric, medical, and substance abuse issues. In these case-based learning clinics, partners rapidly gain deep domain expertise in HCV as they collaborate with university specialists in hepatology, infectious disease, psychiatry, and substance abuse in comanaging their patients. Systematic monitoring of treatment outcomes is an integral aspect of the project. The authors believe this methodology will be generalizable to other complex and chronic conditions in a wide variety of underserved areas to improve disease outcomes, and it offers an opportunity for AHCs to enhance and expand their traditional mission of teaching, patient care, and research. copyright 2007 Association of American Medical Colleges.

2007.2 Suter E, Hyman M, Oelke N. Measuring key integration outcomes: A case study of a large urban health center. Health Care Manag Review 2007;32:226-235

Canadian

Background: Health care reform, through innovative health delivery systems, has been a high priority to address staff shortages, increasingly complex care needs of the aging population, and fragmentation of care. Community health centers have been promoted as one service delivery model with large potential for integration and collaboration. The South Calgary Health Centre (SCHC) opened in June 2004 with the mandate to provide a new model for accessible, accountable, integrated, and community-based health services.

Purpose: The primary objective was to determine the performance of the SCHC; and further, to establish the value of the evaluation framework used in measuring organizational performance of an integrated service delivery model.

Methodology: Multiple stakeholders were involved in the evaluation in a utilization-focused, participatory way. A comprehensive evaluation framework was developed and implemented to assess the performance of the SCHC at system, provider, and patient levels. Functional, clinical, and community integration were key systems outcomes within this framework. Case-study methodology with mixed methods drawing on multiple data sources (both qualitative and quantitative) was used.

Findings: The evaluation findings suggest that the center is functioning well and that staff and client satisfaction are high. Although the model has not achieved all that was originally intended (i.e., fully realized clinical integration), participants felt that the model has been successful and has great potential for integration. The comprehensive evaluation framework developed for this project proved useful in assessing different aspects of integration as well as provider and client perceptions of the center's performance.

Practice Implications: Evaluation findings and recommendations have been used to inform operations at the SCHC and for the planning of future health centers. The evaluation framework may help to standardize evaluation approaches across projects and can be used for monitoring progress of the SCHC as well as future evaluations of integrated service delivery models. copyright 2007 Lippincott Williams & Wilkins, Inc.

2007.3 Keroack, MA, Youngberg, BJ, Cerese, JL, Krsek C et al. Organizational Factors Associated with High Performance in Quality and Safety in Academic Medical Centers. Acad Med 2007;82:1178-1186

Purpose: Leaders of academic medical centers (AMCs) are challenged to ensure consistent high performance in quality and safety across all clinical services. The authors sought to identify organizational factors associated with AMCs that stood out from their peers in a composite scoring system for quality and safety derived from patient-level data.

Method: A scoring method using measures of safety, mortality, clinical effectiveness, and equity of care was applied to discharge abstract data from 79 AMCs for 2003-2004. Six institutions (three top and three average performers) were selected for site visits; the performance status of the six institutions was withheld from the site visit team. Through interviews and document review, the team sought to identify factors that were associated with the performance status of the institution.

Results: The scoring system discriminated performance among 79 AMCs in a clinically meaningful way. For example, the transition of a typical 500-bed hospital from average to top levels of performance could result in 150 fewer deaths per year. Abstraction of key findings from the interview notes revealed distinctive themes in the top versus average performers. Common qualities shared by top performers included a shared sense of purpose, a hands-on leadership style, accountability systems for quality and safety, a focus on results, and a culture of collaboration.

Conclusions: Distinctive leadership behaviors and organizational practices are associated with measurable differences in patient-level measures of quality and safety. copyright 2007 Association of American Medical Colleges.

2007.4 Whitcomb M E. Promoting Global Health: What Role Should Academic Health Centers Play? Acad Med. 2007;82:217-218

Full text:

Each of the articles in this month's journal touches in one way or another on important issues facing academic medicine. The five by Korshum, Souba, Longnecker, Bunton, Mitsch, and colleagues should be of particular interest to academic medicine's leaders, since they discuss the administration and management of the mission-related activities of academic health centers (AHCs). Two additional articles—one by Klasko and Ekarius, the other by Calvin—are also noteworthy, since the authors recount what happened when their institutions dealt with crisis situations. These case studies provide important lessons about the kinds of challenges that academic medicine's leaders will continue to face.

In that vein, I want to call attention to one of the serious challenges that leaders of AHCs in this country must finally address: What role should AHCs play in promoting global health? In two of this month's articles, Houpt, Drain, and colleagues offer recommendations for how global health issues should be taught in medical schools. In a third, Kanashiro and colleagues describe how a Canadian medical school assisted in the creation of a primary care training program in a small, less-developed country in Southeast Asia (Lao). And last year, the journal published five articles and a supplement that dealt with global health issues and academic medicine both here and abroad.^{1–6} The appearance of all these articles in such a short period of time is one sign of a growing interest in global health issues within medical schools in this country and Canada.

That interest is not new, however. For many years, individual faculty at medical schools have been deeply involved in various activities to improve global health. For example, they have developed and managed exchange programs so that health care workers from less-developed countries can spend time in a U.S. AHC acquiring skills to improve health in their home countries. At the same time, a number of U.S. faculty have spent time in those countries to help improve health care there. Finally, some U.S. faculty have been deeply engaged, both in this country and abroad, in the conduct of research focused on conditions, primarily infectious diseases, that are responsible for a great deal of the excess morbidity and mortality experienced by many in the developing world.

Until fairly recently, such activities reflected the particular interests of individual faculty rather than being a manifestation of a strategic objective of their institutions. But times have changed: the increased globalization of society is directly affecting medicine. So it is only natural that academic medicine's leaders and faculty would begin to focus more attention on the issue. For example, the health and well-being of the populations of less-developed countries directly influence the economic growth and stability of those countries. Because of globalization, such developments now have a greater effect on the economic growth and stability of well-developed countries across the globe, including the United States. Given this, it is only natural that a national interest would emerge, crossing many sectors of our society, in seeing to it that programs aimed at improving global health are established in this country.

On the other hand, the general public is becoming increasingly aware that visitors to this country and recent immigrants may introduce diseases that are a threat to those living here. And U.S. citizens run the risk of contracting such diseases while traveling abroad. It is perfectly logical, therefore, that the public would have a growing interest in ensuring that U.S. physicians be educated to have a better awareness of those conditions and how they should be managed and prevented. In many respects, these views support the recommendations by Houpt, Drain, and colleagues in this issue of the journal that the global health content in the medical school curriculum should be increased and that there should be more elective opportunities for medical students to actually experience the state of health in less-developed countries.

Given all of this, I return to the question I posed earlier: What role should AHCs play in promoting global health? I do not ask this question to focus attention on the kinds of excellent curriculum content issues raised by Houpt, Drain, and others. Many medical schools have developed innovative programs designed to achieve the objectives that those

authors describe. Indeed, faculty from over 70 medical schools are members of the Global Health Education Consortium, an organization devoted to improving global health education in medical schools and other health professions schools. Instead, I ask this question to stimulate thinking about the kinds of programs that AHCs as institutions might develop to improve the health of populations in less-developed countries.

Developing and carrying out such programs will be extremely difficult. Despite the incredible talent of the faculty and staff working in U.S. and Canadian AHCs, the challenges that AHCs will face in establishing programs to improve the health of so many populations are almost overwhelming. Perhaps the most daunting is the extraordinary shortage of health care workers in many less-developed countries. A recent report issued by the World Health Organization (WHO) states that there is a serious shortage of health workers in 60 countries across the globe, resulting in the lack of even basic health care services there.⁷ The report suggests that there is a need for over four million doctors, nurses, midwives, and other health care workers in those countries, especially those in sub-Saharan Africa. And in some countries, health workers frequently face social unrest, deteriorating health care infrastructures, economic hardship, violence, and premature death brought about by HIV/AIDS. So, realistically, what might AHCs in the United States and Canada do to improve global health?

To explore this question, *Academic Medicine* will publish an issue devoted to articles on global health in March 2008. The format will be similar to that of the September 2006 issue, which was devoted to articles about major health policy issues facing this country. For that issue, the journal asked each author to propose recommendations for what AHCs might do to help solve the particular policy issue they were addressing. For the 2008 collection of articles, I am particularly pleased that we are going to collaborate with WHO and The Network: Towards Unity for Health on this effort. Lisa Dittrich, the journal's managing editor, will serve as the guest editor for *Academic Medicine's* set of articles. Lisa has already met with staff of WHO and The Network, and the plans for coordinating the publication of the journal's collection with publications by WHO and The Network are well under way. We welcome any ideas that readers of the journal might have about this important project.

Michael E. Whitcomb, MD

2007.5 Fordis, M, Alexander JD, McKellar J. Role of a Database-Driven Web Site in the Immediate Disaster Response and Recovery of an Academic Health Center: The Katrina Experience. *Acad Med.* 2007;82: 769-772

In the wake of Hurricane Katrina's landfall on August 29, 2005, and the subsequent levee failures, operations of Tulane University School of Medicine became unsustainable. As New Orleans collapsed, faculty, students, residents, and staff were scattered nationwide. In response, four Texas medical schools created an alliance to assist Tulane in temporarily relocating operations to south Texas. Resuming operations in a three- to four-week time span required developing and implementing a coordinated communication plan in the face of widespread communication infrastructure disruptions. A keystone of the strategy involved rapidly creating a "recovery Web site" to provide essential information on immediate recovery plans, mechanisms for reestablishing communications with displaced persons, housing relocation options (over 200 students, faculty, and staff were relocated using Web

site resources), classes and residency training, and other issues (e.g., financial services, counseling support) vitally important to affected individuals. The database-driven Web site was launched in four days on September 11, 2005, by modifying an existing system and completing new programming. Additional functions were added during the next week, and the site operated continuously until March 2006, providing about 890,000 pages of information in over 100,000 visitor sessions. The site proved essential in disseminating announcements, reestablishing communications among the Tulane family, and supporting relocation and recovery. This experience shows the importance of information technology in collaborative efforts of academic health centers in early disaster response and recovery, reinforcing recommendations published recently by the Association of Academic Health Centers and the National Academy of Sciences. copyright 2007 Association of American Medical Colleges.

2007.6 Levinson W, Axler H. Strategic Planning in a Complex Academic Environment: Lessons from One Academic Health Center. Acad Med 2007;82:806-811

Leaders in academic health centers (AHCs) must create a vision for their academic unit embedded in a complex environment. A formal strategic planning process can be valuable to help shape a clear vision taking advantage of potential collaborations and to develop specific achievable long- and short-term goals. *The authors describe the steps in a formal strategic planning process and illustrate it with the example of the Department of Medicine at the University of Toronto Faculty of Medicine beginning in 2004.* The process included the active participation of over 300 faculty members, trainees, and stakeholders of the department and resulted in broad-based support and leadership for the resulting plan. The authors describe the steps, which include getting started, committing to planning principles, establishing the work plan, understanding the environment, pulling it all together, shaping the vision, testing strategic directions, building effective implementation, and promoting the plan. Articulation of vision, mission, and values informed the plan's development, as well as 10 key principles integral to the plan. Challenges and lessons learned are also described. The final strategic plan is an active core activity of the department, guiding decisions and resource allocation and facilitating measurement of success or shortcomings. The process the authors describe is applicable to multiple academic units, including divisions/sections, departments, or thematic programs in AHCs. (PDF 00001888-20070800)

**2007.7 Blue Ridge Group. Health care quality and safety in the academic health centre. Blue Ridge Academic Health Group 2007 report 11
www.blueridgegroup.org**

Conclusion

The goal of creating a high quality health care system has become a manifest national priority. This goal has been explicitly adopted by health policy leaders, embraced by public and private organizations and stakeholders and remains at the heart of all health professional norms and values. Despite the initiation of multiple efforts across the nation, the recently published HealthGrades Fourth Annual Patient Safety in American Hospitals

Study reports that progress is slow in American hospitals in preventing medical errors that injure or kill patients. Though hospitals have improved in some areas, overall, the study found a 3% increase in the rate of medical errors in hospitals between 2000 and 2005 (Healthgrades 2007).

AHCs must step forward and bring new leadership to realizing highest quality health care both in our own organizations and in the health care system more broadly. AHCs should address quality and safety as system properties, making the goal and practice of Q&S an indispensable element of professional and organizational culture. This can often best be catalyzed by the adoption of a few BHAGs, which are championed by an engaged leadership supported by governing boards and bodies, where everyone in the organization is incentivized and appropriately rewarded for the achievement of desired behaviors and outcomes. The development of a national health information infrastructure will be essential to making quality and safety job one.

Simply adopting electronic or digital information and decision support systems to existing care practices does not necessarily lead to improved quality, safety or outcomes.

2007.8 Viggiano TR., Pawlina W., Lindor KD., Olsen KD., Cortese DA. Putting the needs of the patient first: Mayo clinic's core value, institutional culture, and professionalism covenant. Acad Med 2007;82:1089-1093

From its inception more than a century ago, *Mayo Clinic's founders instilled the core value, the needs of the patient come first, into the institution's culture.* Today, this core value of professionalism continues to guide the clinic's leadership practices, management strategies, and daily activities. Members of the Mayo Clinic staff embrace and reinforce this core value and regard it as a professionalism covenant: a collective, tacit agreement that everyone will earnestly collaborate to put the needs and welfare of patients first. This covenant is articulated for patients and learners in two key documents, both crafted in 2001—the Mayo Clinic Model of Care, and the Mayo Clinic Model of Education—and is reaffirmed through Mayo Clinic's mission to provide the best outcomes, service, and value in health care to every patient, every day. Mayo's value-based culture serves as a powerful, positive hidden curriculum that facilitates the accomplishment of desired practice and educational outcomes and fosters the development of health care professionals with the highest standards of professionalism. The profound allegiance of Mayo Clinic staff and students to its patient-centered culture connects all to the purpose and meaning of their work, elicits collaboration and voluntary efforts, and fosters an environment that is committed to excellence and continuous improvement. In the context of contemporary challenges and competing commitments facing academic health centers, the authors discuss key initiatives that Mayo Clinic has implemented to preserve the institution's culture, honor the professionalism covenant, and enable faculty, staff, and learners to align their behaviors, work activities, and resources to accomplish the institution's mission. Copyright 2007 Association of American Medical Colleges.

2007.9 Kirchner J.E., Rule C., Kramer T.L., Bennett L.A., Otwell S. Blending education, research, and service missions: The Arkansas model. Acad Med 2007;82:107-112

Creating school and community partnerships with academic health centers (AHC) offers one strategy for initiating and sustaining broad-based change in health systems. This article describes the development, initial evaluation, and current iteration of the Arkansas Partners in Behavioral Health Sciences Model, a collaboration between personnel from an AHC and K-12 schools to address behavioral health issues in children. The model's focus on education, research, and service provides an opportunity for AHC faculty and school personnel to collaborate to promote mental health in school-aged youth. Quantitative and qualitative methods have been used to inform development and confirm effectiveness of the program. From 2001 through 2005, more than 2,700 school personnel from 72 of the 75 counties in Arkansas participated in more than 30,000 hours of continuing education. The programs have also targeted students using interactive televideo presentations, supplemental classroom curricula, and an exhibit in a state science museum, resulting in an outreach to more than 2,500 youths. Results of longitudinal and randomized studies also show changes in knowledge, attitudes, and behaviors. In an era of extraordinary need and finite resources for school systems, AHCs are poised to provide the critical link to improve the scientific knowledge and understanding of behavioral health conditions. The current program targets behavioral health, but AHCs also can incorporate other health conditions, scientific topics, and medical interventions to provide an important service for the public and to accomplish an important mission toward health leadership in the community. copyright 2007 Association of American Medical Colleges.

2007.10 Souba WW, Mauger D, Day DV. Does agreement on institutional values and leadership issues between deans and surgery chairs predict their institutions' performance? Acad Med 2007;82:272-280

Purpose: To gain a better understanding of the values that medical school deans and surgery chairs consider most essential for effective leadership, to assess their perceptions of the values and leadership climate in their institutions, and to test the premise that agreement on leadership values and climate predict greater organizational effectiveness and performance.

Method: From June 2005 through March 2006, questionnaires designed to assess leadership core values and organizational leadership climate were mailed to medical school deans and surgery chairs of the 125 U.S. academic health centers. Institutional performance measures used were the National Institutes of Health (NIH) standing and U.S. News and World Report ranking of each institution.

Results: Sixty-eight surgery chairs (54%) and 60 deans (48%) returned surveys. Q-sort results on 38 positive leadership values indicated that integrity, trust, and vision were considered the most important core values for effective leadership by both chairs and deans. Both groups ranked business acumen, authority, and institutional reputation as least important. Deans consistently ranked the leadership climate as being healthier (more positive) than did their surgery chairs on multiple scale items: leadership is widely shared ($P = .005$), information is widely shared ($P = .002$), missions are aligned ($P = .003$), open communication is the norm ($P = .009$), good

performance is rewarded ($P = .01$), teamwork is widely practiced ($P = .01$), and leaders are held accountable ($P = .002$). Tighter alignment between chairs and deans on core values and on the leadership climate scale correlated with higher school and department NIH standing and higher U.S. News and World Report medical school and hospital ranking ($P < .05$).

Conclusions: Although surgery chairs and deans espouse similar core leadership values, deans believe that a healthier leadership climate exists in their institutions than their surgery chairs do. The study findings suggest that tighter leadership alignment between deans and surgery chairs may predict a higher level of institutional performance in the clinical and academic arenas. copyright 2007 Association of American Medical Colleges.

2007.11 Karpf M, Perman J, Lofgren R, Melgar S et al. Creating an integrated clinical enterprise at the University of Kentucky: The emergence of UK HealthCare. Acad Med 2007;82:1163-1171

If the medical system in the United States is to change, as has been recommended, academic medical centers must, in fact, lead this change process. To prepare for the future, the University of Kentucky decided to move aggressively toward developing an integrated clinical enterprise branded as UK HealthCare, where leadership of the various components of the academic medical center make strategic and financial decisions together to achieve common organizational goals. The authors discuss senior leadership's development of the vision for the enterprise and the governance structure that was established to engage board members and faculty of the institution. They examine the rigorous strategic, facilities, financial, and academic planning that ensued, and the early successes achieved. The authors introduce some of the lessons learned by the organization during the emergence of UK HealthCare and describe the corporate structure and senior management team that was established to support the quick and efficient implementation of the planning strategies. It was this corporate structure and senior management team which has proven to be an effective agent of change and a key to the successful development of a truly integrated clinical enterprise. Copyright 2007 Association of American Medical Colleges.

2007.12 Nation CL, Gerstenberger A, Bullard D. Preparing for change: The plan, the promise, and the parachute. Acad Med 2007;82:1139-1144

The University of California's (UC's) medical education programs are on the brink of change. In January 2007, the UC system completed a multiyear health sciences planning effort that is the most comprehensive undertaken in decades. For medical student education, the plan calls for an approximately one-third increase in enrollment across the system—from approximately 650 current medical school graduates per year to a projected 920 graduates annually by the year 2020. During the same period, California's population is expected to increase in size and diversity in ways unmatched by any other state in the nation. The plan calls for development of new programs that will increase enrollment in unique and unprecedented ways. The first phase of this growth is under way and is planned to continue through a series of programs that seek to address the needs of California's medically underserved communities. Areas of focus include rural health and telemedicine (Davis); the Spanish-speaking Latino community (Irvine); diverse, disadvantaged communities (Los Angeles); health disparities and health equity (San Diego); and the urban underserved (San

Francisco and Berkeley). In November 2006, UC medical schools received \$200 million in bond funding to support this growth and to create new telemedicine programs to increase access to services provided by faculty physicians. In the coming years, UC medical schools will face demographic and budgetary challenges that will require perseverance, creativity, and certain leaps of faith. Public expectations are high. copyright 2007 Association of American Medical Colleges.

2007.13 Zerhouni EA. Translational research: Moving discovery to practice. Clin Pcol & Ther. 2007;81:126-128.

In the first week of October, I announced the launch of a national consortium that will transform how clinical and translational research is conducted; ultimately enabling researchers to provide new treatments more efficiently and quickly to patients. This new consortium, funded through Clinical and Translational Science Awards (CTSAs), begins with 12 academic health centers (AHCs) located throughout the nation. An additional 52 AHCs are receiving planning grants to help them prepare to apply for a CTSA.

2007.14 ACAHO. Moving at the speed of discovery:from bench to bedside to business. 2007 ACAHO website www.acaho.org/doc

In today's fast-paced world, the creation, translation and application of knowledge is the lifeblood of discovery, and the currency of an increasingly information-driven global economy. While the discovery of new knowledge is the forefather of innovation, our future quality of life and overall standard of living depends on our collective ability to harness the many benefits that come from new discoveries.

In a world that is increasingly competitive, inter-connected and rewards speed, it is clear that if Canada is to strengthen its social and economic fabric as well as its international standing – now and well into the future – it must continue to invest in the elements that support and nurture innovation; that is, people, structures, processes and outcomes. Managed within an integrated strategic framework, it is vital that we find ways in which to fully reap the health, social and economic dividends that come from a supportive and dynamic environment that encourages and embraces innovative behavior. If we as a country do not embrace innovation as a high priority public policy goal, Canada will not be able to attract the great minds and talent needed to discover the ideas that will transform our society from good to great. Any move away from such commitments would result in Canada falling out of step with those countries that place tremendous value on the linkages between creating knowledge and its spin-off effects. Understanding the relentless competitive pressures that many traditional industries are facing from emerging economies such as Brazil, Russia, India and China, requires that we look to develop and nurture those sectors where Canada has a proven track record and comparative advantage in knowledge. One area that presents a significant opportunity for Canada is the life sciences and biotechnology sectors. Canada's Teaching Hospitals and Academic Health Regions (also known as "Research Hospitals") – who are the members of the Association of Canadian Academic Healthcare Organizations (ACAHO) – play a critical role in supporting health research, innovation and commercialization in this country. In fact, close to 80% of all publicly funded health research occurs in our members' institutions. In 2006, ACAHO members received a total of over \$3.0 billion in health research funding. Equally important, our members employ more than 20,000 scientists, clinical

investigators, other researchers and staff who are involved in health research.

Understanding that the process of innovation is largely about how we *translate* and *apply* new knowledge, ACAHO has identified three public policy objectives that are mutually reinforcing and complementary in nature. Importantly, these paths to prosperity build on the publicly-funded platform of Medicare. They are:

1. Giving individual Canadians access to state-of-the-art information that is both readily available and understandable so that they can have more direct influence on their health status
2. Driving new evidence through the health system so that providers can make cost-effective clinical decisions that improve patient outcomes, and so that administrators and policy makers can apply evidence to improve the overall architecture, functioning and management of the system; and
3. Accelerating the speed at which Canadian-owned leading-edge discoveries are converted into innovative products and services that will compete in an increasingly interdependent and competitive global economy; bringing with it highly skilled jobs, income, wealth creation and a growing public revenue stream.

Combined, and from a public policy perspective, it is about how can we develop and implement a cohesive strategic plan that will maximize our individual and collective *health* and *wealth*. The challenge – which is not insurmountable – is how to do it...

With enhanced accountability, transparency and evaluation being the hallmarks of good governance in health research, ACAHO believes it would be timely to release a report which focuses on the value added role of Canada's Research Hospitals as key drivers of innovation in two fundamental respects:

1. To underscore the critical role that health research has played in identifying leading-edge clinical discoveries, that is "World Firsts" – of which Canada has a legacy to be very proud of, and
2. To review Canada's recent track record through a series of measures (metrics) that largely focus on the economic outputs that come from health research.

Framed this way, this report looks to strengthen the linkages between the organization and funding of the "inputs" of health research with the "outputs" that come from such investments. In seeking to maximize the country's investments in the health research enterprise, the report identifies:

- A framework in which to consider Canada's health research ecosystem;
- "Return-on-Investment" (ROI) in health, social and economic dimensions;
- Over 100 medical "World Firsts" that have occurred in Canada's Research Hospitals;

- Seven benchmarks that measure the performance and outcomes of health research, from 2003 to 2006, including: 4,245 inventions disclosed, 311 patents and 177 provisional patents filed; 411 licenses executed; \$5.5 million in licence income and \$27.0 million in technology transfer revenue; and
- Over 85 Spin-off companies, employing more than 2,000 Canadians, and generating close to \$1.5 Billion in investment capital between 1999 and 2006.

We are not aware of any other Canadian report that explicitly provides information on the different ways in which health research, innovation and commercialization contribute to the advancement of society. In this context, this report should be viewed as a point of departure, with the understanding that more systematic information will be available in the years to come. The release of *Moving at the Speed of Discovery* is also timely given the release of the federal government's science and technology strategy "*Mobilizing Science and Technology to Canada's Advantage*".

While the document is an important statement of policy by the federal government – containing close to forty policy announcements – it also identifies a series of policy challenges that need to be addressed if Canada is to truly become an innovative society.

More specifically, the federal government's report is a significant contribution to the public policy discussion about the importance of supporting science and technology in Canada. In this regard, ACAHO members recognize the multiple roles that the government plays in health research – from providing 75 cents of each public dollar invested in health research across the country, to its legislative, regulatory and evaluative roles and responsibilities.

At the same time, however, there remain several important policy issues that need to be more fully considered:

1. How can we develop a more compelling vision and integrated strategic road map for Canada's health research enterprise?
2. How can the federal government work seamlessly with the provinces – who are continuing to invest in health research, in addition to Research Hospitals, health charities and the private sector to advance health research?
3. How can we square the circle between the development of innovative products and services – where the federal government plays such a large role – and their diffusion into the health system – where the provinces play such a large role? It would appear that health expenditures and public and private revenue streams are viewed as two solitudes; much more work needs to be done to better understand the value proposition between innovative goods and products, their impact on the health status of Canadians and the derivative economic effects of investing in innovation in this country.

4. How can we develop the appropriate mix of clinical expertise and business acumen to take research from the bench to the bedside to business? At the same time, what role is there for governments and the private sector to fund early stage research?
5. How can we reach and communicate to the public and decision-makers on a more systematic basis the groundbreaking health research that is taking place in Canada and its many impacts?

To continue to move the policy yardsticks further, ACAHO has developed **10 Calls to Action**. These Calls to Action are intended to facilitate multi-sectoral dialogue and consensus, focus on improved integration across sectors, promote overall accountability and transparency, and identify concrete results for Canadians.

At the end of the day, we need to understand that the process of innovation is a race with no finish line. It is relentless and in perpetual motion. It is also clear that countries that continue to invest significant resources in research and development over the long-term are likely to be the knowledge leaders of tomorrow.

In closing, ACAHO believes that the health research enterprise presents Canada with a unique opportunity to improve the quality of life of Canadians while advancing our standard of living by:

- Creating a nimble and well-educated workforce that can compete on a global scale in attracting talent and resources.
- Developing clusters of knowledge-based industries that support the health sector.
- Providing access to state-of-the-art, world class research infrastructure.
- Ensuring the skills and processes are in place to translate knowledge to Canadians, into the system, and across the global marketplace.
- Nurturing more effective relationships and programs between the public and private sectors that accelerate technology transfer and commercialization.
- Creating jobs and revenues, owning the factors of production and generating predictable public revenue streams.

What is now required is that we be bold in our vision, focused in our implementation and relentless in our pursuit of excellence. Any country that has not developed integrated systems of innovation that produce “value” – in this case to the health of its citizens, to the health system and to the economy – will have diminished access to the great minds in the global race for talent, and will be relegated to being a country in decline with lower health outcomes, reduced quality of life and a compromised standard of living.

2007.15 Kanashiro J, Hollaar G, Wright, B. et al Setting Priorities for Teaching and Learning: An Innovative Needs Assessment for a New Family Medicine Program in Lao PDR. Acad Med 2007;82:231-237

Lao People's Democratic Republic (Lao PDR) is a small, tropical, landlocked country in southeast Asia. It is one of the least developed countries in the region, and its socioeconomic indicators are among the lowest 25% in the world. The World Health Organization has long called for increased equity in primary health care access around the world. To meet this need in Lao PDR, the Family Medicine Specialist Program was developed, a Lao-generated postgraduate training program designed to produce community-oriented primary care practitioners to serve the rural, remote areas of Lao PDR, where 80% of the population lives. An innovative method of needs assessment was required to determine the health care priorities to be met by this new program. Through the use of a modified Delphi technique, local key leaders in medical education, clinical specialists, and teachers were consulted to develop prioritized objectives for the hospital-based curriculum of the program. By setting priorities for teaching and learning in the unique and needy circumstances of Lao PDR, a novel approach to curriculum planning in a low-income country was explored and ultimately formed the foundation of the new curriculum. This process served to direct the allocation of scarce resources during implementation of this groundbreaking program. More importantly, this model of needs assessment could potentially be used to customize medical curricula in other low-income countries facing challenges similar to those in Lao PDR.

2006

2006.1 Anderson GF. Controlling U.S. Health Spending: Opportunities for Academic Health Centers. Acad Med. 2006;81:807-811

This article begins by examining the factors that explain the level and rate of increase in health care spending. Expenditures per capita for health care in the United States are more than double the expenditures per capita in Canada, the United Kingdom, France, and most other industrialized countries. The main reason for the higher expenditures is not that Americans have access to or receive more health care, but that the prices Americans pay for medical services are two to three times higher than the prices in other industrialized countries. The author examines three actions that leaders of academic health centers (AHCs) could take that could reduce the burden of these higher costs on the American public. First, leaders of AHCs could compare the costs in their hospitals to the costs in comparable hospitals in other countries to find out why hospitals in the United States are so much more expensive. Second, they could examine how much they charge the uninsured for hospital services at AHCs—generally two to ten times more than they charge people with insurance. Third, including more people with multiple chronic conditions in clinical trials could make the findings of the clinical trials applicable to a larger patient population and thereby reduce the substantial geographic variation of health care that exists in the United States.

2006.2 Newton WP, DuBard CA, Shaping the future of academic health centers: the potential contributions of departments of family medicine. Ann of Fam Med;2006: 4 Suppl 1:S2-11

2006.3 Whitcomb, M E. Helping Meet the Challenges Facing Academic Medicine. Acad Med 2006;81:855

Editorial

For some time, the editorial staff and I, with the concurrence of the editorial board and the association's executive staff, have been increasingly focusing the journal's content to address the major challenges facing the leaders of academic medicine. One approach has been to solicit articles (including research reports) describing how individual institutions have managed specific challenges. We have also been receptive when individuals have offered to serve as guest editors to assemble articles addressing different aspects of a particular challenge. As a general rule, both types of articles have been well received by those who read the journal on a regular basis, and have brought the journal some new regular readers.

This issue of the journal reflects a variation on those strategies, in that it includes a collection of articles describing *how a single institution—the University of Washington School of Medicine (UWSOM)—has addressed a number of different challenges*. Last year, Paul Ramsey, MD, vice president for medical affairs and dean of the school of medicine, contacted me to suggest it might be appropriate to feature the UWSOM in the October 2006 issue of the journal, since the association's annual meeting was to be held in Seattle at the end of that month. I must admit I thought it was a good idea because it provided an opportunity to present a more complete picture of the large number of challenges facing academic health centers. But I also admit that we had some second thoughts about the project, simply because we didn't want readers to view the issue as a sort of public relations ploy for the UWSOM. Needless to say, in the end we decided to go ahead and work with members of Paul's staff in making the issue a reality. Tom Norris, MD, vice dean for academic affairs, Marjorie Wenrich, MPH, director of medical affairs special research and community projects, and Erika Goldstein, MD, associate professor of medicine, served as the guest editors for the collection of articles in this month's journal.

One of the reasons for publishing such a collection of articles is that it may serve as a catalyst for other institutions to consider producing their own collections. The simple fact is that while there are challenges common to all, or to most, of the medical schools and teaching hospitals in this country, there are significant differences in the ways the institutions respond to them. In addition, there are some challenges that are more specific to certain institutions due to differences in their locations, relationships to their parent universities, and the nature of their clinical and research enterprises. Since I believe very strongly that articles describing the experience of particular institutions provide useful lessons for how other institutions might address a particular challenge, I would like to see more institutionally based collections like the one in this month's journal. But the journal also welcomes individual articles addressing any of the major issues confronting academic medicine, including the issues covered in the UWSOM collection. Let me briefly describe two of these.

As most readers know, the *Association of American Medical Colleges has called on its member medical schools to increase enrollments by 30%*. It would be extremely valuable to publish reports describing how specific schools have been able to respond to this challenge. I am aware, in a general sense, of a variety of different strategies that schools are employing to accommodate more students in the facilities where the preclinical, nonexperiential elements of the curriculum are conducted, and how they are providing the necessary clinical experiences in a variety of patient care settings. The UWSOM strategy described in this issue of the journal is an interesting approach that builds on the unique nature of the multistate WWAMI program in the region. I hope that schools that have embarked on major enrollment increases will be willing to prepare manuscripts that describe in some detail how they are doing that.

I would also like to see manuscripts describing the approaches that institutions are using to provide students and residents more exposure to global health issues. This is a topic of growing importance not only for those in the health professions, but also for the general public. The development of a global health department at UWSOM, which spans the schools of medicine and public health, is an interesting approach. But how are other schools addressing this challenge, particularly those based in universities that do not have a school of public health?

Needless to say, the challenges facing the academic medicine community are almost endless. I believe the journal plays a special role—indeed, even a unique role—by publishing articles focusing on those challenges and thereby offering key information that academic medicine’s leaders can use to enhance the education, research, clinical care, and community service missions of their institutions. Although each institution’s leaders would like to think that they can, on their own, develop effective solutions to the problems they face, they can also gain greatly by at least being aware of how others have addressed similar problems in their institutions. The community at large benefits when individual members are willing to take the time and make the effort to prepare manuscripts describing their experiences. We at Academic Medicine are willing to do anything that we can to assist that process.

Michael E. Whitcomb, MD

2006.4 Boex J.R. Keck C.W. Piatt E. Nunthirapikorn T.N. Blacklow R.S. Academic health centers and public health departments: Partnership matters.

Background: The Institute of Medicine has called for increased population-based training for healthcare professions students, and particularly medical students. For this to be effective, students should receive such training in the locations where population-based approaches to care take place, such as public health departments (HDs). However, little is known about currently existing relationships between academic health centers (AHCs) and HDs.

Methods: During the spring and summer of 2003, e-mail surveys on this topic were sent to the 104 members of the Association of Academic Health Centers, and 500 members of the National Association of City and County Health Officers and the Association of State and Territorial Health Officers. Results were received from 50 AHCs and 201 HDs.

Results: Survey results suggest that large numbers of healthcare professions students - residents, medical students, and others - are currently being trained in many HDs nationwide. The web of relationships between AHCs and HDs extends beyond education into research, service, and other purposes.

Conclusions: These preliminary results require verification. Nevertheless, they raise questions about the types and quality of the education being offered in health departments, the impact of AHC/HD relationships on both parties, and how existing relationships may be enhanced to meet current and future national needs. copyright 2006 American Journal of Preventive Medicine.

2006.5 Schmitz C. Quante S. Debatin J.F. Modern organization of medical centers, why center formation? - The example of the University Medical Center Hamburg-Eppendorf. Chirurgische Gastroenterologie Interdisziplinär. 22(4)(pp 230-235), 2006.

The economic pressures arising from the reform of the health care system are forcing hospitals and university medical centers to strengthen and expand their market positions in a framework of heightened domestic and international competition. University medical schools need to improve the quality of their health care delivery along with their research and education efforts. To meet these goals at a time of diminishing public financial support, extensive structural reorganization is required. Thus, it is necessary to create decentralized business units in the form of centers. The University Medical Center Hamburg- Eppendorf (UKE) resolved to take these measures at an early stage and has already achieved remarkable success in the process. In addition to relieving physicians of management and controlling tasks, the Medical Center has made significant progress in generating transparent cost and revenue structures. In terms of health care delivery, the UKE has established clear areas of priority and created interdisciplinary centers of medical competence. In research and education, the university instituted a performance- based resources allocation process. Furthermore, with the help of external partners, improvements were generated in process quality, in efficiency via benchmarking and in the optimization of tertiary support services. The creation of decentralized structures has had a lasting impact on the business culture of the UKE and created the foundation for permanent strategic growth. copyright 2006 S. Karger GmbH.

2006.6 Gruenewoldt EC, Brimacombe, GG. A View from the top: A survey of ACAHO presidents and chief executive officers. ACAHO document. July 2006

Over the past five years, the Association of Canadian Academic Healthcare Organizations (ACAHO) has moved a significant way in terms of providing a national voice for Teaching Hospitals, Regional Health Authorities and their Research Institutes that are responsible for the academic mission (i.e., service provision, education & training, and research & innovation). In support of this mandate, the Association has developed and released a number of policy-related documents that focus on the strategic activities of members and the role of the federal government.

To supplement the views, as well as recommendations offered by the Association, it was considered timely to ask members (i.e., its Presidents and CEOs) to comment on a range of health system policy issues at one moment in time.

More specifically, while members of the Association hold very senior positions of trust in their communities and frequently comment publicly as the leader of a Teaching Hospital and/or a Regional Health Authority, this is the first time ACAHO has surveyed its members on a series of contemporary health system issues which are linked to the day-to-day operations of teaching hospitals and regional health authorities across the country.

Sixty seven percent of ACAHO's member Presidents and Chief Executive Officers responded to the survey which focused on the following national health policy issues of direct interest and importance:

1. System Performance
2. Wait Times and Access to Care
3. The Federal Role in Health Care
4. Health Research Innovation and Commercialization
5. Canada's Academic Health Sciences Centres as a National Resource
6. Canada Health Act
7. Public-Private Partnerships (P3s), and the
8. Health Council of Canada

2006.7 Michener JL, Powell DE, Susman JL, Norris T et al. Family Medicine and the Evolution of Academic Health Centers: A dialogue with leadership. Ann Fam Med 2006;4(suppl):S55-S57

2006.8 Roper WL, Newton WP. The role of academic health centers in improving health. Ann Fam Med 2006;4(suppl) S55-S57

So having laid out the overall goals and identified potential funding sources, where does that leave us regarding the role of our AHCs in improving the health of the population? Our job is to lead in the transformation of health care. We have in one place the most transformative research occurring—and often the responsibility to care for the most vulnerable in our population. Yet, our institutions are, in many respects, the most conservative part of the health care system, conservative in the sense that fundamental change is very difficult. It is no accident that a recent *Robert Wood Johnson Foundation study on clinical quality improvement stated that substantial clinical change is “orders of magnitude” harder in academic centers than in private settings.*¹⁰ Most major medical centers see the path to greatness as national excellence in biomedical research. We assert that we ought to strive for excellence through regional effectiveness as well—in other words, in how successful we are at improving the health of the population in the geographic areas around us.

2006.9 Sostman HD, Forese LL, Boom ML, Schroth L et al. Building a transcontinental affiliation: A new model for academic health centers. Acad Med. 2006;81:Suppl 61-68

The recent affiliation of The Methodist Hospital (TMH) with Weill Medical College (WMC) of Cornell University and New York-Presbyterian Hospital is the first transcontinental primary affiliation between major, not-for-profit academic health centers (AHCs) in the United States. The authors describe the process followed, the issues involved, the initial accomplishments, and the opportunities envisioned. The key enablers of this affiliation were a rapid process, mutual trust based on existing professional relationships, and commitment to the project by Board leadership. Because of their geographic separation, the parties were not competitors in providing clinical care to their regional populations. The affiliation is nonexclusive, but is reciprocally primary in New York and Texas. Members of the TMH medical staff are eligible for faculty appointments at WMC. The principal areas of collaboration will be education, research, quality improvement, information technology, and international program development. The principal challenge has been the physical distance between the parties. Although extensive use of videoconferencing has been successful, personal contact is essential in establishing relationships. External processes impose a slower sequence and tempo of events than some might wish. This new model for AHCs creates exciting possibilities for the tripartite mission of research, education, and patient care. Realizing the potential of these opportunities will require unconstrained ideas and substantial investment of time and other critical resources. Since many consider that AHCs are in economic and cultural crisis, successful development of such possibilities could have importance beyond the collective interests of these three institutions. Copyright copyright 2005 by the Association of American Medical Colleges.

2006.10 Chatman VS, Buford JF, Plant B. The building and sustaining of a health care partnership: The Meharry-Vanderbilt alliance. Acad Med 2006;81:Suppl 54-60

The ability of academic health centers (AHCs) to maintain their financial viability and mission in the face of revolutionary changes was broadly discussed during the last decade. *Among the suggestions for protecting the future of AHCs was to form strategic alliances to further the missions of education, research, and service. Although the evidence indicates that 55% of strategic alliances fall apart after three years, the Meharry-Vanderbilt Alliance is now beginning its fifth year, and it appears to be growing stronger. This article presents a brief overview of the evolving historical relationship between Meharry Medical College and Vanderbilt University Medical Center—two institutions that share the same fundamental missions but have very different traditions, cultures, resources, and emphases for medical training—and their relationship with Metropolitan General Hospital at Meharry, a public hospital.* The characteristics that have distinguished this strategic alliance are its organizational structure, clearly articulated and measurable objectives, an independent central office, and a shared responsibility for the management and provision of clinical services at Nashville General Hospital. The belief that the Meharry-Vanderbilt Alliance is the “right thing to do” has provided a foundation for cooperation at all levels of both AHCs.

2006.11 Kirch DG, Grigsby RK, Zolko WW, Moskowitz J et al. Reinventing the academic health center. Acad Med 2006;81:Suppl 10:38-46

Academic health centers have faced well-documented internal and external challenges over the last decade, putting pressure on organizational leaders to develop new strategies to improve performance while simultaneously addressing employee morale, patient satisfaction, educational outcomes, and research growth. In the aftermath of a failed merger, new leaders of The Pennsylvania State University College of Medicine and Milton S. Hershey Medical Center encountered a climate of readiness for a transformational change. In a case study of this process, *nine critical success factors are described that contributed to significant performance improvement: performing a campus-wide cultural assessment and acting decisively on the results; making values explicit and active in everyday decisions; aligning corporate structure and governance to unify the academic enterprise and health system; aligning the next tier of administrative structure and function; fostering collaboration and accountability-the creation of unified campus teams; articulating a succinct, highly focused, and compelling vision and strategic plan; using the tools of mission-based management to realign resources; focusing leadership recruitment on organizational fit; and "growing your own" through broad-based leadership development.* Outcomes assessment data for academic, research, and clinical performance showed significant gains between 2000 and 2004. Organizational transformation as a result of the nine factors is possible in other institutional settings and can facilitate a focus on crucial quality initiatives. Copyright copyright 2005 by the Association of American Medical Colleges.

2006.12 Hafferty F. Viewpoint: The elephant in medical professionalism's kitchen. Acad Med 2006;81:906-914

The rise of the corporation within health care during the 1980s and early 1990s was met by organized medicine with a deluge of editorials, articles, and books that identified a singular enemy-commercialism-and depicted it as corrosive of, and antithetical to, medical professionalism. Medicine's ire proved prognostic as scores of highly publicized corporate-medical scandals began to crater the landscape of a rapidly emerging "medical marketplace. "Medicine's main weapon" in this counteroffensive was a renewed call to medical professionalism. Numerous organizations hosted conferences and underwrote initiatives to define, measure, and ultimately inculcate professionalism as a core medical competency. Nonetheless, an examination of medicine's overall response to the threat of commercialism reveals inconsistencies and schisms between these praiseworthy efforts and a parallel absence of action at the community practitioner and peer-review levels. The most recent salvo in this war on commercialism is a policy proposal by influential medical leaders who call for an end to the market incentives linking academic health centers and medical schools with industry. These forthright proposals nevertheless appear once again not to address the heartbeat of professional social control: community-based peer review, including a vigorous and proactive role by state medical boards. The author concludes by examining the implications of a professionalism bereft of peer review and explores the societal-level responsibilities of organized medicine to protect, nurture, and expand the role of the physician to maintain the values and ideals of professionalism against the countervailing social forces of the free market and bureaucracy.

2006.13 Gazewood JD, Rollins LK, Galazka SS. Beyond the horizon: The role of academic health centers in improving the health of rural communities. Acad Med 2006;81:793-797

Academic health centers (AHCs) face increasing pressures from federal, state, and community stakeholders to fulfill their social missions to the communities they serve. *Yet, in the 21st century, rural communities in the United States face an array of health care problems, including a shortage of physicians, health problems that disproportionately affect rural populations, a need to improve quality of care, and health disparities related to disproportionate levels of poverty and shifting demographics. AHCs have a key role to play in addressing these issues.* AHCs can increase physician supply by targeting their admissions policies and educational programs. Specific health concerns of rural populations can be further addressed through increased use of telemedicine consultations. By partnering with providers in rural areas and through the use of innovative technologies, AHCs can help rural providers increase the quality of care. Partnerships with rural communities provide opportunities for participatory research to address health disparities. In addition, collaboration between AHCs, regional planning agencies, and rural communities can lead to mutually beneficial outcomes. At a time when many AHCs are operating in an environment with dwindling resources, it is even more critical for AHCs to build creative partnerships to help meet the needs of their regional communities.

2006.14 Salsberg E, Grover A. Physician workforce shortages: Implications and issues for academic health centers and policymakers. Acad Med 2006;81:782-787

A physician shortage is likely given current levels of medical education and training. Because an increase in physician supply through expansion of U.S. medical school capacity will require ten or more years, there is little time left to affect the supply of new physicians in 2020 when a substantial number of baby boomers will be over 70 years of age. Even with a substantial increase in medical education and training capacity, it is unlikely that all of the increased demand for health services can be met with physicians. In addition to the challenges of expanding medical school enrollment, the nation will need to grapple with other ramifications of demand exceeding supply. This includes assessing how to deliver services more effectively and efficiently and the future roles of the physician and other health professionals. These challenges are particularly difficult for medical schools and teaching hospitals, the cornerstones of medical education and training in the United States. Osteopathic and off-shore schools targeted to Americans have been willing and able to grow more quickly and less expensively than U.S. medical schools, in part because of their more narrow approaches to medical education. In addition, physicians from less developed countries continue to migrate to the United States in significant numbers. Medical schools, teaching hospitals, and policymakers will need to address several major questions as they respond to the shortages. They will either confront and address these issues in the next few years or they will be forced to change by others in the future.

2006.15 Garson Jr A. Overview: Health policy and academic health centers. Acad Med 2006;81:781

In this issue of Academic Medicine, a distinguished group of experts present their views of specific health policy issues and share their ideas on how the leaders and teachers in academic medicine can help study and move health policy in the areas they discuss. Each author identifies problem areas and suggests the role of academic health centers in the application of findings to patients and society through a variety of strategies. *The themes are remarkably consistent: the need for academic medicine to collect and disseminate data on best practices, to create and use guidelines to reduce practice variations to foster greater patient safety and reduce health disparities, to use evidence-based formularies, improve efficiency (e.g., offering models for administrative waste reduction), and to improve the appropriateness of tests and visits. Many of the recommendations apply to all of medicine but also are highly applicable to academic health centers, such as suggesting that they take the lead demonstrating potential improvements in the malpractice system, and promoting prompt disclosure and earlier settlements. Some apply directly to academic health centers: they should provide telemedicine to rural areas, educate more members of underrepresented minorities, improve patient safety in clinical research protocols, and initiate clinical trials on new treatments directed specifically at complex patients. Finally, the authors in this issue emphasize academic medicine's crucial role in advocacy at the federal and state levels to create optimal health policies for the nation.*

2006.16 Whitcomb ME. The future of academic health centers. Acad Med 2006;81:299-300

Full Text:

During the past decade and a half, academic health centers (AHCs) have been the subject of a great deal of attention. During the mid-1990s, leaders in the academic medicine community expressed their concerns about the continued viability of AHCs. More recently, both the Commonwealth Fund and the Institute of Medicine established blue-ribbon committees to identify and comment on the major challenges AHCs must address if they wish to maintain a prominent role in society.

From where I sit, it now appears that AHCs are, for the most part, thriving. There is no question that their programmatic activities continue to expand. It is also striking to observe all of the major construction projects that AHCs have under way or are about to begin. So I think there are good reasons to be optimistic about the future of these institutions.

But having said that, it is also important to recognize that AHCs are likely to be somewhat different in the future. At issue here is whether the traditional education mission of AHCs is going to decline in prominence. *To be more specific, will the clinical faculties of the medical schools continue to be the primary teachers of clinical medicine for students and residents? And will major teaching hospitals continue to be the chief sites for their clinical education experiences? In short, will AHCs continue to bear the main responsibility for the clinical education of medical students and residents?*

There are good reasons for believing that in the not-too-distant future a growing number of students and residents will be learning clinical medicine outside of AHCs. Indeed, the migration of students from the inpatient services and clinics of major teaching hospitals to a variety of community-based clinical care sites has been under way for a number of years. In many medical schools, students are now fulfilling core clerkship requirements in community hospitals, community health centers, multispecialty group practices, and the offices of individual practitioners. In a very real sense, the clinical education of medical students is increasingly being achieved by placing students in structured apprenticeships in which community-based practitioners are the students' teachers and mentors. Recognizing this, many schools are devoting considerable resources to enhance the educational experiences provided in those settings.

It now appears that the migration of residents from the inpatient services and clinics of major teaching hospitals is about to begin. For the past few years, the internal medicine community has been struggling to come to agreement on the redesign of residency training in internal medicine. All of the major organizations—the American College of Physicians, the American Board of Internal Medicine, the Society for General Internal Medicine, and those that compose the Alliance for Academic Internal Medicine—agree that changes are needed to align the training of internists with the current realities of internal medicine practice. This is a worthy goal that deserves the support of the entire academic medicine community. And while there is not full agreement on the nature of the changes that should be adopted (as I write this in early January), it appears that the following is likely to occur.

Core training in internal medicine will likely decrease from three years to two years, thus allowing residents to track into more specialized training beginning in their third postgraduate year. If this occurs, residents who aspire to be hospitalists will spend their third year on the inpatient services of hospitals, but those who wish to practice as general internists will spend much of their third year in ambulatory-care settings. And those who wish to subspecialize—the majority of internal medicine residents—will begin “fellowships” in one of the internal medicine subspecialties. It also appears that during the two years of core training, residents will spend more time learning how to care for patients in ambulatory care settings. This will likely be accomplished by eliminating the residents' continuity-clinic experiences and creating blocks of time (rotations) devoted entirely to ambulatory-care experiences.

So what effect will this have on the medical schools and hospitals that compose the country's AHCs? I think the effect will be pretty profound. Realize this: ***If the redesign effort turns out much as I have described it, a significant number of the internal medicine residents who now cover the inpatient services of teaching hospitals will no longer be available for those assignments. The majority of the current third-year residents will be serving as first-year fellows or as general internal medicine residents assigned to ambulatory-care settings. In addition, first- and second-year residents will be assigned full-time to ambulatory-care blocks instead of attending continuity clinics while also assigned to inpatient services. So who is going to cover the inpatient services and clinics now covered by internal medicine residents? Therein lies a major challenge that AHCs will have to confront in the near future.***

But the challenge will not end there. The surgery community has indicated the need for a redesign of residency training in general surgery and other surgery specialties. A blue-ribbon committee composed largely of chairs of surgery departments worked for several years to develop a plan for accomplishing this. While there is not full agreement among the various parties about how to proceed, it seems inevitable that changes in surgery residencies will occur. And the pediatrics community has just begun a redesign initiative that will lead to changes in pediatrics residencies. It is difficult to imagine that the outcomes of these efforts will not affect residents' coverage of inpatient and clinic services of major teaching hospitals. While the effects may not be as pronounced as those resulting from the internal medicine redesign effort, they will undoubtedly add to the challenge facing AHCs.

I think there are only three viable alternatives for meeting this challenge: (1) major teaching hospitals will find themselves having to hire physicians (hospitalists) or other health professionals (advanced practice nurses or physicians' assistants) to provide the patient care services now provided by residents, or (2) faculty practice plans will have to hire those individuals, or (3) the clinical faculty will have to provide those services themselves. The negotiations between the hospital administrative staff and the medical school or faculty practice plan administration over how this issue should be resolved will be highly charged in many AHCs. But the relevant issues will have to be settled to ensure that the hospital patients are well served.

If anyone presumes that this challenge will simply fade away over time, they should be aware that there are other activities under way focusing attention on the need to redesign residency training in this country. The Agency for Healthcare Quality and Research has supported conferences focusing national attention on the issue, the Association of American Medical Colleges has several initiatives in progress that relate to it, and several AHCs have established programs to promote residency redesign from within. Accordingly, it would behoove all AHCs to begin to plan for how they will respond once the various initiatives reach fruition.

The end result of these residency redesign efforts will be that the education mission of AHCs will be less prominent in the future than it is today and that, in one way or another, AHCs' clinical faculty will have greater responsibility for providing a range of patient care services than they do now. The impact this will have on the other missions of AHCs, particularly their clinical research mission, will become apparent only as the strategies for providing the patient care services now carried out by residents begin to unfold.

We should not underestimate the potential seriousness of this issue. Accordingly, I believe that the leadership of AHCs should anticipate the future and begin now to plan for how they will respond to the outcomes of the redesign efforts for medical students' and residents' education so that the research and patient care missions do not suffer when AHCs' role in clinical education declines.

Michael E. Whitcomb, MD

2006.17 Paller MS, Cerra FB. Investing in research: The impact of one academic health center's research grant program. Acad Med 2006;81:520-526

External research funding provides the core support for a medical center's research enterprise, and is a major or sole criterion for comparing and ranking institutions. Most grant programs are sufficiently competitive that awards are not granted without the availability of preliminary data. Therefore, institutions may find it necessary to supplement external research funds, particularly as matching funds or as seed funds. The authors report their experience at the University of Minnesota Academic Health Center with two internal grant programs, a seed grant program and an interdisciplinary/ intercollegiate Faculty Research Development (FRD) grant program. Seed grants are one-year, one-time \$25,000 awards to investigators to initiate a new direction in research or to develop innovative projects allowing faculty to expand into new research areas. FRD grants are one-time \$200,000 awards for a one- to three-year project that support innovative interdisciplinary and interscholastic research with a high potential for future grants. The authors based their analysis of program outcomes on investigators' self-reports of subsequent external grants and peer-reviewed publications stemming from the initial grants. Six annual cycles of the seed grant program (1998-2003) yielded a financial return on investment (ROI) of 560%. Five annual cycles of the FRD grant program (1998-2002) yielded an ROI of 237%. *The authors conclude that the AHC grant program has been successful in generating external research funds (primarily National Institutes of Health) and publications; stimulating risk-taking; and developing interdisciplinary and intercollegiate collaboration. They plan to continue the AHC grant program and recommend similar programs to other institutions.*

2006.18 Andreae MC, Blad K, Cabana MD. Physician compensation programs in academic medical centers. Health Care Manag 2006;31:251-258

Many academic health centers are creating incentive-based physician compensation programs, leading to skepticism regarding the impact on the academic mission. We sought to systematically review the impact of these programs. Most academic compensation programs demonstrate a positive impact on clinical and scholarly productivity, quality of education, and faculty satisfaction.

2006.19 Sheridan DJ. Reversing the decline of academic medicine in Europe. Lancet 2006;367:1698-1701

An international campaign to revitalise academic medicine on a global scale has been launched⁸ and has worked to identify the causes of its present difficulties and possible strategies for its reform^{9,10}. Academic medicine in Europe has traditionally occupied a position of great strength but faces particular challenges; it consistently lags behind the USA, is now increasingly challenged by India and China, and faces particular problems associated with expansion and integration. Overhauls in funding structures and teaching, boosting public confidence in science, and restoring academic medicine to its critical role between bench and bedside are some of the solutions that could help academic medicine in Europe get back on track.

The editorial discusses Signs of decline and the need for change. Under the latter, the following are described:

- Creating promising research careers
- Building public confidence
- Research assessment based on health needs
- Promoting teaching
- Restructuring funding

“Restoring academic medicine to the heart of biomedical science in Europe is achievable, and there are signs that the process has begun. Clinical academics must contribute to understanding the issues involved and work to save academic medicine.”

2006.20 Yusuf, SW. Itr to editor Re: Decline of Academic Medicine Lancet 2006;368:284

Academic medicine should provide two systems: one for researchers and one for pure clinicians, who should support each other in academic endeavours. Unless we recognise those who spend most of their time looking after patients, we will lose them to the private sector and end up with a glut of researchers and no one to teach clinical skills and bedside medicine to the coming generation.

2006.21 McDougle L, Gabel LL, Stone L. Future of family medicine workforce in the United States. Family Practice. 2006;23:8-9.

In response to the Future of Family Medicine Leadership Committee’s recommendations The Ohio State University Department of Family Medicine convened 10 faculty development sessions covering the following strategic objectives: (1) Promoting a Sufficient Family Medicine Workforce, (2) the Role of Family Medicine in Academic Health Centers, (3) The New Model of Family Medicine, (4) Electronic Medical Records, (5) Family Medicine Education, (6) Lifelong Learning, (7) Enhancing the Science of Medicine, (8) Quality of Care, (9) Communications, and (10) Leadership and Advocacy. The focus of this editorial is on initiatives and programs to promote a sufficient family medicine workforce. In comparison to other industrialized countries, the United States ranked lowest in primary care functions and lowest in health care outcomes, but highest in health care expenditures. Despite this fact, the trend for United States medical school graduates to select subspecialty careers continues upward. Through collaboration and advocacy, we can all ensure a continued enthusiasm for the selection and retention of family medicine as a career.

2006.22 Gerber D, Bekes C, Parrillo J. The future of hospital economic health. Crit Care Med. 2006;34:388-393

Objective: To evaluate factors which may influence the economic future of academic medical centers (AMCs).

Data Source and Selection: A literature search was performed to identify publications which reviewed the areas of revenue sources for AMCs, costs and expenses incurred by these institutions, and mechanisms for optimizing institutional economic stability.

Data Extraction and Synthesis: Data were reviewed and evaluated in two primary contexts: hospital revenues and organizational and administrative factors influencing hospital economic health.

Conclusions: Increasing economic stress will require AMCs to make efforts both to increase revenue through a variety of mechanisms and to minimize expenses without compromising their mission or impairing worker morale.

2005

2005.1 Weiner, BJ, Ricketts TC, Fraher EP, Hanny D et al. Area Health Education Centers: Strengths, Challenges, and Implications for Academic Health Science Center Leaders Health Care Manag Review:2005;30:194-202

2005.2 Hespanhol A. Ribeiro O. Costa-Pereira A. Quality assurance in Sao Joao Health Center. Arquivos de Medicina. 19(5-6)(pp 191-197+231), 2005.

Aims: To know the overall satisfaction of Sao Joao Health Center's patients as well as their satisfaction with all the other aspects of the service provided by the Health Center.

Methods: It was used a self administered questionnaire to all the patients that went to Sao Joao Health Center during one week (10-14 May 2004).

Results: 78% of the patients (n=576) answered the questionnaire. All the variables of the overall satisfaction of Sao Joao Health Center's patients and their satisfaction with all the other aspects show high values of median, percentile 90 and percentile 10, except: 19,11 e 7% of the respondents greatly disagree with 'I am satisfied with the time spent to get an appointment of a consultation', 'Since I arrive until I am attended I didn't spent a lot of time' and 'It's easy to go to this Health Center' respectively.

Conclusion: Sao Joao Health Center's patients show high levels of satisfaction with the health care delivered, except the waiting time. This quality problem must be selected to promote several Cycles of Quality Assurance integrated in a Program to establish a Quality Assurance process in Sao Joao Health Center. copyrightArquiMed, 2005.

2005.3 Herrera-Valdes R. Almaguer-Lopez M. Strategies for national health care systems and centers in the emerging world: Central America and the Caribbean - The case of Cuba. Kidney International, Supplement. 68(98) (pp S66-S68), 2005

Over 40% of the 76 million people in Central America and the Caribbean live in poverty with no safety net. Communicable and noncommunicable diseases significantly impact morbidity and mortality, and a tendency toward aging suggests increasing prevalence of chronic conditions. Among factors related to renal diseases: obesity is an epidemic among the near-poor; prevalence of diabetes mellitus is 6% to 8%; and hypertension is 8% to

30%. The region's racial-ethnic composition - associated with depressed socioeconomic conditions - is comparable to US minorities showing greater chronic renal disease (CRD) rates than those registered in Central America and the Caribbean, which suggests that this region may be among the world's most seriously affected by CRD. This is a reality masked by lack of health care coverage. Health policies generally have not prioritized human resource development, and training is biased toward curative care instead of prevention. Nephrologists are less than 20 per million population in most countries. Health care infrastructures are poor, lacking the primary care facilities charged with prevention. Cuba shares economic limitations with its neighbors but is one of the region's least socially stratified countries, with a universal, free, and public health care system emphasizing primary health care and prevention. Human resource development has resulted in 59.6 physicians per 10,000 inhabitants and a family physician program covering the whole population. A national renal diseases program incorporates preventive strategies at all care levels. Nevertheless, early detection of patients with CRD remains a challenge in the Cuban context. In Central America and the Caribbean, prevention is the key to reducing medical, social, and economic costs of renal disease. copyright 2005 by the International Society of Nephrology.

2005.4 Turisco F, Keogh D, Stubbs C, Glaser J, Crowley Jr et al. Current status of integrating information technologies into the clinical research enterprise within US Academic Health Centers: Strategic value and opportunities for investment. *Jr Invest Med* 2005;53:425-433

Little information exists about the incorporation of information technologies (ITs) into clinical research processes within US academic health centers (AHCs). Therefore, we queried a group of 37 leading AHCs regarding their current status and future plans in clinical research IT. The survey specifically inquired about the presence or absence of basic infrastructure and IT support requirements; individual applications needed to support study preparation, study conduct, and its administrative support; and integration of data from basic research, clinical trials, and the clinical information systems increasingly used in health care delivery. Of the 37 AHCs, 78% responded. All strongly agreed that a "state-of-the-art" clinical research IT program would be ideal today and will be essential tomorrow. Nonetheless, no AHC currently has an IT solution that even approached this ideal. No AHC reported having all of the essential management foundations (ie, a coherent vision, an overall strategy, a governance structure, and a dedicated budget) necessary to launch and sustain a truly successful implementation of a cohesive clinical research IT platform. Many had achieved breakthroughs in individual aspects of clinical research IT, for example, adverse event reporting systems or consent form templates. However, overall implementation of IT to support clinical research is uneven and insufficient. These data document a substantial gap in clinical research IT investments in leading US AHCs. Linking the clinical research IT enterprise with its clinical operations in a meaningful fashion remains a crucial strategic goal of AHCs. If they are to continue to serve as the "translational research engines" that our society expects, AHCs must recognize this gap and allocate substantial resource deployment to remedying this situation.

2005.5 Shannon GW., Bashshur R, Kratochwill E, Dewitt J. Telemedicine and the Academic Health Center: The University of Michigan Health System Model. Telemedicine Jr and e-Health. 2005;11:530-541

The changing health care environment is generating a number of challenges for Academic Health Centers' (AHC) ability to pursue their traditional tripartite mission of medical care, education, and research. *A number of strategies have been suggested to aid the AHC to respond, among them telemedicine. In this paper, telemedicine is examined for its potential to assist in meeting financial, cost, and quality challenges.* In particular, the model developed at the University of Michigan Health System for implementing telemedicine within the AHC is presented together with lessons learned. This model, based largely on intramural rather than extramural funding, is offered as a basic strategy to be considered by AHCs facing these challenges.

2005.6 Sostman HD, Forese LL, Boom ML, Schroth L et al. Building a transcontinental affiliation: A new model for academic health centers. Acad Med 2005;80:1046-1053

The recent affiliation of The Methodist Hospital (TMH) with Weill Medical College (WMC) of Cornell University and NewYork-Presbyterian Hospital is the first transcontinental primary affiliation between major, not-for-profit academic health centers (AHCs) in the United States. The authors describe the process followed, the issues involved, the initial accomplishments, and the opportunities envisioned. *The key enablers of this affiliation were a rapid process, mutual trust based on existing professional relationships, and commitment to the project by Board leadership. Because of their geographic separation, the parties were not competitors in providing clinical care to their regional populations. The affiliation is nonexclusive, but is reciprocally primary in New York and Texas. Members of the TMH medical staff are eligible for faculty appointments at WMC. The principal areas of collaboration will be education, research, quality improvement, information technology, and international program development. The principal challenge has been the physical distance between the parties. Although extensive use of videoconferencing has been successful, personal contact is essential in establishing relationships.* External processes impose a slower sequence and tempo of events than some might wish. This new model for AHCs creates exciting possibilities for the tripartite mission of research, education, and patient care. Realizing the potential of these opportunities will require unconstrained ideas and substantial investment of time and other critical resources. Since many consider that AHCs are in economic and cultural crisis, successful development of such possibilities could have importance beyond the collective interests of these three institutions.

2005.7 Cripe TP, Thomson B, Boat TF, Williams DA. Promoting translational research in academic health centers: Navigating the "roadmap". Acad Med 2005;80:1012-1018

The translation of hypothesis-driven research laboratory findings about basic disease mechanisms into clinically useful tests or therapies, particularly in pediatric diseases, is time-consuming, expensive, and not well supported by traditional research grant mechanisms. Accordingly, the development of new drugs and clinical assays has typically been largely the domain of the pharmaceutical industry. Aside from partnering with

for-profit companies, academic health centers are challenged to find ways to actively engage in biomedical research to bridge the gap between basic and clinical research. *The Translational Research Initiative (TRI) at Cincinnati Children's Hospital Medical Center was launched in 2001 with the mission to build an institutional infrastructure for promoting and facilitating the clinical implementation of investigator-initiated basic research. The TRI's goals are to provide grant support for proposals that are translational in nature and that address serious diagnostic or therapeutic deficiencies in pediatric illnesses; to create and support specialized research cores and a specialized office that provides support for research protocol development and regulatory affairs; and to organize educational opportunities focused on bridging communication between basic and clinical scientists and encouraging multidisciplinary interactions.* The authors describe the program structure and provide an interim outcome report as measured by extramural funding obtained, Investigational New Drug applications filed, manuscripts published, clinical trials launched, and educational initiatives created. The broad success of this program suggests that it might serve as a model for other academic health centers in promoting and conducting translational research.

2005.8 Kirch DG, Grigsby RK, Zolko WW, Moskowitz J et al. Reinventing the academic health center. Acad Med 2005;80:980-989

Academic health centers have faced well-documented internal and external challenges over the last decade, putting pressure on organizational leaders to develop new strategies to improve performance while simultaneously addressing employee morale, patient satisfaction, educational outcomes, and research growth. In the aftermath of a failed merger, new leaders of The Pennsylvania State University College of Medicine and Milton S. Hershey Medical Center encountered a climate of readiness for a transformational change. In a case study of this process, nine critical success factors are described that contributed to significant performance improvement: performing a campus-wide cultural assessment and acting decisively on the results; making values explicit and active in everyday decisions; aligning corporate structure and governance to unify the academic enterprise and health system; aligning the next tier of administrative structure and function; fostering collaboration and accountability-the creation of unified campus teams; articulating a succinct, highly focused, and compelling vision and strategic plan; using the tools of mission-based management to realign resources; focusing leadership recruitment on organizational fit; and "growing your own" through broad-based leadership development. Outcomes assessment data for academic, research, and clinical performance showed significant gains between 2000 and 2004. Organizational transformation as a result of the nine factors is possible in other institutional settings and can facilitate a focus on crucial quality initiatives.

2005.9 Chervenak FA, McCullough LB. Responsibly managing the medical school-teaching hospital power relationship. Acad Med 2005;80:386-391

The relationship between medical schools and their teaching hospitals involves a complex and variable mixture of monopoly and monopsony power, which has not been previously been ethically analyzed. As a consequence, there is currently no ethical framework to guide leaders of both institutions in the responsible management of this complex power relationship. The authors define these two forms of power and, using economic concepts, analyze the nature of such power in the medical school-teaching hospital relationship,

emphasizing the potential for exploitation. Using concepts from both business ethics and medical ethics, the authors analyze the nature of transparency and co-fiduciary responsibility in this relationship. On the basis of both rational self-interest, drawn from business ethics, and co-fiduciary responsibility, drawn from medical ethics, they argue for the centrality of transparency in the medical school-teaching hospital relationship. *Understanding the ethics of monopoly and monopsony power is essential for the responsible management of the complex relationship between medical schools and their teaching hospitals and can assist the leadership of academic health centers in carrying out one of their major responsibilities: to prevent the exploitation of monopoly power and monopsony power in this relationship.*

2005.10 Whitcomb ME. Redesigning clinical education: A major challenge for academic health centers. Acad Med 2005;80: 615-616

Full Text:

In last month's editorial, I indicated that I had asked the editorial board to consider whether the journal should play a greater role in helping current and future leaders of academic medicine gain a better understanding of some of the important challenges facing academic health centers. Since the board and I agreed that the journal should take on that role, Academic Medicine will begin in the near future to publish more articles (Viewpoints, Articles, and Research Reports) that address those challenges. In the hopes of stimulating potential authors to submit such manuscripts, I will outline in a future editorial some of the important institutional issues that the editorial board and I believe should be addressed in articles appearing in the journal.

To illustrate the kind of issue that deserves attention in the journal, I will comment in this editorial on what I believe to be one of the most important challenges facing medical schools and teaching hospitals.

To begin, I call attention to two major reports on academic health centers (AHCs) that provide an important context for the decision to focus more of the journal's attention on major institutional issues. In 2003, The Commonwealth Fund Task Force on Academic Health Centers issued a report that summarized the results of its work over the previous seven years.¹ And in the same year, the Committee on the Roles of Academic Health Centers in the 21st Century—a committee convened by the Institute of Medicine (IOM)—published its own report.² In weighing the importance of the conclusions and recommendations appearing in the reports, readers should recognize that both panels were composed of leaders in academic medicine—individuals who understand clearly from first-hand experience the nature of the issues being faced by AHCs.

I'm surprised at how little attention the reports seem to have received. I suspect that they were read and discussed within the various organizations that represent either AHCs or the individual institutions that make up AHCs (medical schools, teaching hospitals, and other health professions schools). But I don't recall that any of those organizations, or others that represent various elements of the academic medicine community, issued detailed responses that set forth strategies for how the academic community should respond to the issues the panels identified, or that challenged the reports' conclusions and recommendations.

Because Academic Medicine serves the interests of both medical educators and institutional leaders, I think it is appropriate for the journal to focus attention on these reports, since both place special emphasis on how important it is for AHCs to meet the critical challenges facing their education mission. The IOM Committee was perfectly clear about this:

The committee believes that among all of the AHC roles, education will require the greatest changes in the coming decade We regard education as one of the primary mechanisms for initiating a cultural shift toward an emphasis on the needs of patients and populations and a focus on improving health, using the best of science and the best of caring.

And in keeping with this view, The Commonwealth Fund Task Force called on the institutions to assume more direct responsibility for the quality of the educational programs they sponsor.

With that in mind, let me comment on what is clearly one of the major challenges that AHCs must meet successfully if they are to fulfill their education mission—that is, how can medical schools and teaching hospitals ensure in today’s health care environment that medical students and residents have opportunities to learn how to provide high-quality medical care?

To appreciate the magnitude of this challenge, readers must recognize that students and residents cannot learn clinical medicine adequately unless they participate on a regular basis and in a developmentally appropriate manner in structured apprenticeship experiences that allow them to observe master clinicians interacting with and providing care to patients. And for those experiences to be most effective, the patients involved must have conditions that are relevant to the learners’ stage of education and training. And for that to occur, the encounters must take place in the clinical venues where those patients are currently seeking care.

Now, many of those responsible for the clinical education of medical students recognize that assigning students to teams caring for patients on the inpatient services of major teaching hospitals—the traditional approach that has dominated the teaching of clinical medicine for decades—is no longer the best way to promote students’ learning of clinical medicine. The reality is that the kinds of patients admitted to those services, the increasingly specialized nature of the services, the dynamics of care provided on the services, and the composition of the teams to which the students are attached have all changed dramatically in recent decades. These changes have had a major and often negative effect on students’ ability to learn clinical medicine. Among other things, students generally do not encounter (in sufficient numbers, or at all) the kinds of patients they should for optimal learning, and their role as members of the inpatient team has become increasingly marginalized. The end result is that students assigned to those teams are no longer having a meaningful apprenticeship experience. Recognizing this, medical schools are assigning an increasing number of their students to clerkship experiences based in other clinical settings where the types and mix of patients are more appropriate for their stage of learning.

The situation is more complex when it comes to the education of residents. First, the changes that have occurred in major teaching hospitals affect some specialties more than others. Second, because residents are further along in their training, they are more likely to benefit educationally from some of the encounters they experience in hospital settings. Nevertheless, residency program directors in some specialties are facing major challenges as they attempt to ensure the quality of their residents' educational experiences. And in turn, the approaches that may have to be adopted to address those challenges present particular difficulties for the medical schools and teaching hospitals that are the institutional sponsors of those programs.

For example, let us consider the current situation facing internal medicine. I think many would agree that internal medicine residencies have been profoundly affected by the changes that have occurred on the inpatient services of major teaching hospitals. Many in the internal medicine community recognize the growing challenge that internists face in caring for patients afflicted with one or more chronic diseases. As a result, they believe that the amount of time internal medicine residents should spend in ambulatory care and other clinical settings should be substantially increased. At issue is not whether there are important lessons to be learned by participating in the care of patients hospitalized on the medicine services of major teaching hospitals. The issue is whether those experiences are adequate to allow residents to learn what an internist, regardless of whether the individual practices general internal medicine or one of the subspecialties, needs to know to provide high-quality care in the 21st century.

My purpose in focusing on internal medicine is not to enter the debate on how internal medicine residency programs should be redesigned—that debate is fully under way within that internal medicine community. Instead, I am using the internal medicine situation to make an important point. A redesign process that results in some residents' being transferred from the inpatient services of teaching hospitals to other clinical venues—an approach recommended by many—will clearly have an effect on the institutions that sponsor the programs. In particular, teaching hospitals—the institutions that finance the programs—will face a daunting challenge in developing acceptable arrangements for continued funding of the programs. And reaching agreement with clinical faculty on how the services that residents now provide on inpatient services will be provided in the future is likely to present an even greater challenge.

Be that as it may, those who hold leadership roles in medical schools and teaching hospitals must meet the challenges noted above if the clinical education of future physicians is to prepare them adequately to provide high-quality care to the patients that seek their help. To do so, they must play an active role in the design of the clinical education experiences that students and residents will need in ambulatory care settings and other clinical care venues. They must be involved in determining how the quality of those educational experiences will be documented, and how they will be managed and financed. In addition, they need to spend time thinking about how the clinical education experiences available on the inpatient services of teaching hospitals might be redesigned to increase their educational value for students and residents.

And they will also have to determine how other educational strategies—such as the use of virtual patients and other simulation exercises—can complement what students and residents can learn from their involvement in the care of real patients.

In my view, the readers of *Academic Medicine* and the academic medicine community at large will benefit if the journal publishes articles that provide insight into how those objectives can be achieved or that describe how some institutions have begun to address these important challenges. Readers should recognize that this is a “Call for Papers” on that topic, something we will frequently do for other institutional topics in the months ahead.

Michael E. Whitcomb, MD

2005.11 Kane RL, Bershady B, Weinert C, Huntington S et al. Estimating the patient care costs of teaching in a teaching hospital. *Am J Med* 2005; 118:767-772

Purpose: Because leaders at medical schools and teaching hospitals need current data to estimate the clinical costs of graduate medical education, the authors developed a new methodology to estimate the hospital costs associated with the presence of teaching physicians for the year 2002.

Method: A hospital accounting system was used to determine the case mix-adjusted direct variable costs for 41 522 inpatient admissions associated with or without a teaching physician.

Results: Prior to adjustment, teaching cases had greater median costs than non-teaching cases. After severity adjustment, teaching cases in aggregate were associated with an additional 4.4% of the total direct variable cost of inpatient admissions, or \$3.6 million. The size of the teaching effect varied by service, ranging from -5.7% for medical services to 13 percent for behavioral services. The effect of teaching on cost centers such as laboratory, pharmacy, and radiology varied by specialty service. Teaching was associated with a negligible 0.7% relative difference in length of stay.

Conclusion: The incremental effects of teaching on hospital patient care costs are modest. These analyses can be repeated annually to detect changes in teaching costs and to target areas of excessive cost for interventions that improve efficiency. Our results and methods for identifying hospital costs associated with teaching services may prove useful in negotiations between academic health centers and affiliated teaching hospitals.

2005.12 Baum KD, Axtell S. Trends in North American medical education. *Keio Jr of Med.* 2005;54:22-28

Medical education in the United States of America (USA), and worldwide, is increasingly concentrating on the process and outcome of the educational experience. The first efforts to substantially improve medical education in the USA resulted in the Flexner Report in the early 1900s. The release of this report led to significant advancements in the quality of curriculum content. However, in the past few decades there has been increasing realization that delivery of content will not, by itself, assure the development of excellent physicians. As a result, there has been an increasing emphasis on the process, and, most recently,

the outcome, of medical education. Process movements have examined the context and methods for teaching and learning. The problem-based learning movement is perhaps the most widely-known example of process trends. The latest trends in USA medical education focus on the outcomes of the learning process. At the forefront of this movement is the American Council on Graduate Medical Education (ACGME), which accredits all USA post-graduate training programs. Recently, the ACGME has defined a set of six core clinical competencies that all graduates must demonstrate. A second emerging trend is inter-professional education. Increasingly, healthcare is provided by inter-professional healthcare team, and students must be competent to function effectively in this setting. Many academic health centers are developing joint curricula to address this need. Medical education has evolved from a primary focus on content to an emphasis on process of teaching and learning, and will increasingly concentrate on educational outcomes.

2005.13 Retchin SM, Clark RR. Contemporary challenges and opportunities at academic health centers. *Jr Healthcare Manag* 2005;50:121-135

Academic health centers (AHCs) have struggled in recent years to redefine their special position in healthcare delivery. This article presents a description of structural and process features at AHCs to serve as a framework for redesigning healthcare delivery at AHCs. *We review and synthesize the literature regarding health system performance. In addition, we address attributes of healthcare delivery that represent both challenges and opportunities for AHCs, including costs of care; comprehensiveness and capacity of care; coverage; continuity, communication, and coordination of care; consistency of practice; and consolidation. Recommendations on priorities for AHCs are given, and specific features of desirable academic delivery systems for the future are described.*

2005.14 Joiner KA., Wormsley S. Strategies for defining financial benchmarks for the research mission in academic health centers. *Acad Med* 2005;80:211-217

Valid financial benchmarks are needed for the research mission in academic health centers (AHCs). Databases listing institutional success in obtaining sponsored research funding are publicly available. However, these databases are generally not adjusted for AHC size, confounding useful comparisons between institutions. The authors suggest simple strategies, which depend on a form of ratio analysis, to circumvent this limitation. Annual rates of growth (rates of return, Rf) are determined for total National Institutes of Health research grant dollars, number of research grants, and average dollars per research grant for 15 U.S. AHCs. Selected institutions are compared to one another and to the total pool of medical school funding. Performance is evaluated over a ten-year period (1992-2001) to illustrate the advantages, limitations, and applications of the ratio analysis approach. Alternative strategies are suggested for individual AHCs to evaluate their departmental and organizational performance, again without regard to institution size, and also dependent on ratios. Application of these strategies, especially when individualized to the particular AHC, permits more accurate assessment of past performance and more accurate and effective planning for future growth.

2005.15 Bickel J, Brown AJ. Generation X: Implications for faculty recruitment and development in academic health centers. Acad Med 2005;80:205-210

Differences and tensions between the Baby Boom generation (born 1945-1962) and Generation X (born 1963-1981) have profound implications for the future of academic medicine. By and large, department heads and senior faculty are Boomers; today's residents and junior faculty are Generation X'ers. Looking at these issues in terms of the generations involved offers insights into a number of faculty development challenges, including inadequate and inexperienced mentoring, work-life conflicts, and low faculty morale. These insights suggest strategies for strengthening academic medicine's recruitment and retention of Generation X into faculty and leadership roles. These strategies include (1) improving career and academic advising by specific attention to mentoring "across differences" - for instance, broaching the subject of formative differences in background during the initial interaction; adopting a style that incorporates information-sharing with engagement in problem solving; offering frequent, frank feedback; and refraining from comparing today to the glories of yesterday; to support such improvements, medical schools should recognize and evaluate mentoring as a core academic responsibility; (2) retaining both valued women and men in academic careers by having departments add temporal flexibility and create and legitimize less-than-full-time appointments; and (3) providing trainees and junior faculty with ready access to educational sessions designed to turn their "intellectual capital" into "academic career capital." Given the trends discussed in this article, such supports and adaptations are indicated to assure that academic health centers maintain traditions of excellence.

2005.16 Whitcomb ME. Sustaining biomedical research: A challenge for academic health centers. Acad Med 2005;80:203-204

Full Text:

During the past half century, this country's biomedical research enterprise has, with few, if any, exceptions, increased in size and scope each year. Fueled to a great extent by the robust extramural research budget of the National Institutes of Health (NIH), the number of medical school faculty engaged in research has grown accordingly. Despite these trends, some believe that the size of the research enterprise may not be sustainable in the years ahead because of inadequate levels of NIH funding, even though such funding is likely to continue increasing well into the future. Be that as it may, it is important to recognize that there are other factors that may adversely affect the growth of the country's biomedical research enterprise. Among these are forces acting to produce an environment within medical schools and teaching hospitals that could become less friendly to and supportive of the conduct of research.

There is no question that the environment within which biomedical research is conducted has changed rather dramatically in recent years. Some of the changes are the result of government efforts to address moral and ethical breaches by individual investigators and the failure of institutions to adequately monitor the conduct of research by members of their faculties and staffs. Other changes reflect the complexity introduced by the increase in funding by for-profit corporations. And some reflect the growing complexity of the organizational structures of academic medical centers and its impact on the relationships within the institutions.

But despite all of these forces (and others), the biomedical research enterprise so far continues to thrive.

This issue of the journal presents articles about additional challenges that must be met to sustain the research productivity of U.S. medical schools and teaching hospitals. The authors address various aspects of two factors that are key to carrying out biomedical research in academic medical centers—namely, the number and qualifications of those faculty whose primary responsibility in their institutions is the conduct of research. Taken as a whole, the articles suggest that the leaders of academic medical centers must consider some new approaches for managing their institutions' biomedical research effort.

In their article, Bickel and Brown raise what may prove to be one of the most important issues determining the future of the country's biomedical enterprise: creating effective programs for mentoring young faculty. Among the points they make is that because of the growing complexity of academic medicine, mentoring young faculty is increasingly important for their career development and, therefore, for the future success of their institutions. And they maintain that one of the keys to effective mentoring is to overcome the generational differences that are now so apparent in academic institutions. In their view, if academic medical centers hope to maintain their research enterprises over time, they must find ways to bridge the generational differences that exist between current faculty members and the medical students, graduate students, and residents who will compose the research faculty of the future.

Chang and colleagues describe an additional factor in the challenge of developing effective mentoring programs for young research scientists. They acknowledge the importance of mentors in guiding the career development of young scientists in the traditional postdoctoral training model. But they point out that the emerging demand for multidisciplinary investigations of research questions requires that new approaches be adopted for postdoctoral training, and describe a successful example of such an approach. They emphasize that the multidisciplinary nature of the necessary new training models makes it difficult to identify faculty who can effectively guide the development of young scientists.

Needless to say, effective mentoring of trainees interested in careers in biomedical research will contribute to the future health of the country's biomedical enterprise only if the institutions where they work manage their resources to create a productive research environment. In the third article in this issue of the journal, Joiner points out that decisions regarding the allocation of scarce institutional resources for the recruitment of new faculty are among the most crucial ones that leaders of academic institutions must face. He suggests that faculty recruits should not be viewed in isolation but instead treated as "projects" that the institution is investing in with the hope of an appropriate return on the investment at some time in the future. And he goes on to propose a strategy to do this. He argues that viewing the recruitment of faculty in this way provides a more systematic approach for prioritizing resource allocation across the institution, which will result in its greater success in the long run.

Finally, Bland and colleagues shed light on some of the factors affecting the research productivity of institutions. Their model, not surprisingly, points out that individual,

institutional, and leadership characteristics influence the productivity of individuals and departments operating within a large, research-oriented medical school. Their analysis makes clear that the motivation of individual investigators, effective mentoring of young research faculty, protected time to conduct research, and the opportunity to interact with a network of colleagues are critical determinants of the research productivity of the institution. Leaders of academic institutions who do not focus some of their time and effort on ensuring that these conditions exist cannot expect their institutions to develop or maintain meaningful research programs.

These four articles outline many of the strategies that institutional leaders must adopt if they want their institutions to have strong research programs in the future. For example, these leaders must understand the personal and career goals of individuals currently in training, since some of them must become future leaders of the country's biomedical research enterprise. They must ensure that their institutions have training programs in place that will prepare those individuals to address the kinds of multidisciplinary research questions they will face in the future. And they must ensure that those individuals are effectively mentored throughout the early years of their career development. Academic leaders must become more strategic in committing institutional resources to the recruitment of new faculty and creating conditions within their institutions to ensure that motivated and skilled individuals will be as productive as they can be. A major agenda and a major challenge for these leaders.

Michael E. Whitcomb, MD

2005.17 Joiner KA. The not-for-profit form and translational research: Kerr revisited?. Jr Translational Med. 2005;3:article 19

Translational research conducted in academic health centers is confounded by the organizational structure in which the work is performed. Investigators must obtain research funding and appropriate recognition as a part of a research team in a not-for-profit environment which has more readily rewarded basic work, and individual accomplishments. What results is a unique form of conflict of interest, best understood by relating the basic principles underlying the not-for-profit form to the conduct of translational research in the AHC setting.

2005.18 Park ER, Wolfe TJ, Gokhale M, Winickoff JP, Rigotti NA. Perceived preparedness to provide preventive counseling reports of graduating primary care residents at academic health centers. Jr Gen Intern Med. 2005;20:386-389

Objective: To assess the perceived preparedness of residents in adult primary care specialties to counsel patients about preventive care and psychosocial issues.

Design: Cross-sectional national mail survey of residents (63% response rate).

Participants: Nine hundred twenty-eight final-year primary care residents in Internal Medicine (IM), family practice (FP), and Obstetrics/Gynecology (OB/GYN) at 162 U.S. academic health centers.

Measurements: Residents self-rated preparedness to counsel patients about smoking, diet and exercise, substance abuse, domestic violence, and depression.

Results: Residents felt better prepared to counsel about smoking (62%) and diet and exercise (53%) than about depression (37%), substance abuse (36%), or domestic violence (21%). In most areas, females felt better prepared than males. Rates of counseling preparedness varied significantly by specialty after adjustment for gender, race, medical school location, and percent of training spent in ambulatory settings. FP residents felt better prepared than OB/GYN residents to counsel about smoking, diet and exercise, and depression, while OB/GYN residents felt better prepared to address domestic violence than IM or FP residents. IM residents' perceptions of preparedness were between the other 2 specialties. Proportion of training spent in ambulatory settings was not associated with residents' perceived preparedness.

Conclusions: Physicians completing residencies in adult primary care did not feel very well prepared to counsel patients about preventive and psychosocial issues. Significant differences exist among specialties, even after adjusting for differences in time spent in ambulatory settings. Increasing residency time in ambulatory settings may not alone be sufficient to ensure that residents emerge with adequate counseling skills.

2005.19 Steiner BD, Calleson DC, Curtis P, Goldstein AO, Denham A. Recognizing the value of community involvement by AHC faculty: A case study. Acad Med 2005;80:322-326

Physicians seek connections to their communities. Some health care and academic leaders believe that facilitating the creation of more such community connections is one way to reverse the trend of waning social and political legitimacy for the U.S. medical profession. For academic health centers (AHCs), such connections can maintain local and state support crucial to their long-term success. Multiple barriers exist to such involvement, especially for physicians in AHCs, where work done beyond direct patient care, administration, and research rarely contributes to the tenure and promotion process. The authors present a case study to show how one department in an AHC, beginning in the late 1990s, has been overcoming these barriers to incorporate the scholarship of community engagement into its mission and structure. The case study incorporates theoretical underpinnings to crystallize the following lessons that the department has learned so far: (1) If academic departments wish community service to be a central part of their mission, they need ways to institutionalize community engagement within organizational structures. (2) Community engagement can be scholarly. (3) If faculty members are to be recognized for their service activities, measures are necessary to determine what constitutes "excellence" and "scholarship" in community service. (4) Scholarship of community engagement goes beyond performing service activities in the community.

2005.20 Detmer DE, Steen EB. The academic health centre: leadership and performance. 2005; Cambridge University Press. ISBN 0521827183 978052182718

The leadership and management of academic health centers present challenges as complex as any in the corporate environment. A consensus is emerging about their integrated mission

of education, research and service, and this book, focusing on value-driven management, is the most up-to-date and comprehensive review of these issues available. Based on reports produced by the Blue Ridge Academic Health Group, which has developed a framework for meeting the challenges of improving health in the 21st century, it also contains invited commentaries and case studies from leading authorities in and beyond the United States. It identifies the public policies and organizational practices required to maximise the health status of individuals and the population, and highlights innovative practices. It is essential reading for managers and leaders of clinical and basic science departments in academic health centers, and for all those involved in health systems management studies.

**2005.21 El-Jardali F, Fooks C. Environmental scan of current views on health human resources in Canada: Identified problems, proposed solutions and gap analysis. Health Council of Canada June 23, 2005
www.healthcouncilcanada.ca**

The Health Council of Canada strongly believes that the health care renewal goals established by the First Ministers cannot be achieved without a collaborative and coordinated approach to resolving the complex issues of health human resources.

Successful health care reform will depend on the provision of effective, efficient, accessible, sustainable, high-quality services by a workforce that is present in sufficient numbers, appropriately trained for the new models of delivery, and equitably distributed across the country. This reality highlights the urgent need to modernize how we manage health human resources in Canada.

Effective management of health human resources requires a committed and sustained effort. Leaders responsible for educating, training, employing, regulating, and funding the health care workforce must work together, along with researchers and experts in the field of health human resources. To this end, the Health Council has convened a Health Human Resources Summit to initiate dialogue and examine solutions and success stories.

In preparation for the Summit, the Health Council staff have conducted an environmental scan of current views on health human resource issues in Canada. Specifically, the scan:

- identifies the key policy positions of stakeholder organizations and governments related to four theme areas (education and training, scopes of practice, workplace issues, and health human resource planning);
- highlights the solutions proposed by stakeholders and governments; and
- explores the range of gaps between identified problems and the proposed solutions.

The scan is not meant to be a comprehensive inventory of initiatives across the country nor is it a literature review. There is a great deal of activity in Canada focused on our health care workforce. Learning from history, governments and stakeholders recognize that health human resource management is not a one-time effort but requires careful and ongoing attention.

There is also recognition that simple or quick solutions mask the complexity of the enterprise. As governments chart the course of health care renewal, health human resource

requirements need to move in parallel. Changes to the way health care professionals are educated, trained, employed, funded and regulated are needed to support the First Ministers' commitments on national health care renewal.

2005.22 Rapport finale. Comité sur les capacités d'accueil dans les programmes de formation médical Avril 2005

Il se dégage des travaux menés par le Comité, que les hausses de clientèles très importantes qui sont survenues au cours des dernières années dans les programmes de formation médicale au Québec, d'abord dans les programmes de premier cycle, et ensuite, dans ceux de formation postdoctorale, ont eu un impact très significatif sur les capacités d'accueil disponibles des milieux de stage employés pour la formation des étudiants de premier cycle et des résidents en médecine.

Ainsi, les capacités d'accueil actuelles sont atteintes dans la plupart des milieux de stage d'externat employés par les quatre facultés de médecine québécoises. L'état actuel des capacités d'accueil des milieux de stage de résidence n'est guère plus rassurant : en médecine familiale, trois facultés auront atteint leur capacité à accueillir de nouveaux résidents dès 2005-2006. Plusieurs des sept programmes de spécialités qui ont été pris en considération ont déjà atteint un point de rupture. Ainsi, en médecine interne et en psychiatrie, deux facultés sur quatre feront face à une situation critique en 2005-2006, et, en toute logique, ne seront pas en mesure d'accepter toutes les nouvelles inscriptions prévues. En anesthésiologie et en radiologie diagnostique, deux programmes dans lesquels des plateaux techniques sont requis pour la formation des résidents, trois facultés ont déjà en 2004-2005, atteint un point de rupture. Dans un tel contexte, il est possible que des candidats soient refusés au cours des prochaines années.

Les membres du Comité constatent avec regret que les conditions de la formation médicale ont peu changé depuis l'automne 2002, alors que le Groupe de réflexion sur les conditions de la formation médicale déposait son rapport final, malgré des investissements de l'ordre de 150 M \$ au cours de la période qui s'étend de 2003 à 2008 de la part du ministère de l'Éducation du Québec pour de grands projets d'immobilisations destinées à la formation médicale sur les campus des universités dotées d'une faculté de médecine. Les ressources professorales suffisent toujours à peine à répondre aux besoins, compte tenu de la taille des cohortes. De plus, les infrastructures disponibles dans les milieux d'enseignement clinique sont inadéquates, compte tenu de la taille des cohortes, et des exigences liées à la formation académique. Les équipements requis pour l'enseignement sont souvent insuffisants, ou désuets. Aussi, bien qu'un certain financement supplémentaire ait été octroyé aux universités pour leur permettre d'accepter les nouveaux étudiants que le gouvernement a souhaité les voir admettre en 2003-2004 et 2004-2005, celui-ci est très inférieur aux besoins qu'elles ont exprimés.

2004.1 Cruess, RL, Smith, DH, Wright CJ. Evaluation of the Ontario Academic Health Science Centres Alternative Funding Program (Phase 1): A Major Step Forward. Ontario Report March 26, 2004

The serious problems currently facing Academic Health Science Centres (AHSC) in Canada have been well documented, including difficulty recruiting and retaining highly skilled and educated academic physicians, growing competition from the increasing tertiary care capacity in community hospitals, inappropriate fee schedules, inadequate funding for academic activities, unhealthy competition among AHSCs for personnel and resources, practice plans that are in danger of failure, and increasing teaching loads. There is an urgent need for changes that could address these problems in Ontario and bring stability to the clinical academic institutions that are so essential to the present and future health needs of the population. The Ontario Ministry of Health and Long Term Care (MOHLTC), the universities, the teaching hospitals, the clinicians, and the Ontario Medical Association (OMA) have all recognized these problems and over the last few years they have begun to work on potential solutions. Extremely important issues in this arena are the relationship of physicians to their AHSC and their financial stability. In recent years there has been increasing interest in funding methods other than fee-for-service (FFS) and these Alternative Funding Plans (AFPs) have been introduced already in many provinces, including some in Ontario, with remarkable success. Early attempts to introduce AFPs on a more extensive scale in Ontario's AHSCs met with difficulties due mainly to the perception that the amount of money offered by the Ministry in the process was fixed and inadequate. Plans were then revised into a 3-Phase process, and Phase 1 was implemented in 2003.

This report is the result of the Ministry's request for an external evaluation of the process and results of the Phase 1 AFPs in each of the AHSCs in the province (see Terms of Reference, page iv). The evaluators have reviewed relevant documents and literature, and interviewed the deans of the 5 medical schools, chairs of the governing bodies at the various sites, and medical and hospital leaders from every academic health sciences centre (AHSC) and major affiliated hospital in the province of Ontario. Although it would be premature to carry out an evaluation of Phase 1 based on objective data, the extensive information gathered was consistent and it permitted a detailed analysis of the history and present situation leading to the recommendations in this report.

ii. The problems surrounding the process of negotiating the Phase 1 contracts, particularly at the beginning, included lack of trust among the participants, the perceived lack of a well conceived plan, lack of fairness and transparency in the formula for distribution of funds, and inadequacy of the funds available. However, the negotiations succeeded eventually in attracting a large proportion of the clinical teachers at all sites. The main issues noted concerning the implementation of Phase 1 were:

- successful creation of governance structures, although they are functioning at different levels of effectiveness.
- distribution of the new "non-conversion" funds was largely flow-through per capita, although some sites used a more selective approach.

- minimal accountability provisions were included in the contracts at this stage.
- creation of practice plans has been proceeding, but not yet accomplished fully at all sites.
- administrative difficulties due to inadequate allocation of resources for management of the AFP.
- difficulties in efficient management of the 10% FFS conversion process.

The results of the Phase 1 AFP implementation are encouraging. Many expressed the view that the prospect of more complete alternative funding facilitated recruitment. It was consistently seen as a stimulus to cooperation and there is already an atmosphere of less suspicion of Ministry motives. Some practice plans on the brink of dissolution have been rescued and there is general satisfaction that academic activities are at last beginning to be recognized in funding. No adverse effects of the Phase 1 plan were identified, but it must be noted that many of the participating groups and individuals are still strongly independent and have yet to achieve the culture change that would facilitate the development of full AFPs. Strong messages were heard during this evaluation process, and after careful consideration the evaluators were able to make a series of observations and recommendations that will help all of the partners involved to move ahead:

- there is overwhelming interest in moving to a full AFP rather than progressing through the 50% conversion Phase 2 that was proposed
- the parties need to establish a central provincial team to guide a more horizontal process for negotiations
- the clinicians are looking for a clear message that the development of AFPs will proceed and that further funding will be negotiated
- the governing bodies will eventually have to understand and implement governance rather than only management that is the current predominant role
- the values of fairness and transparency are held in high esteem but must apply equally to all partners
- appropriate designation of in-scope and out-of-scope activities is crucial
- AFP contracts must include a meaningful accountability framework based on a province-wide template that addresses clinical activities (including quality management), academic productivity, and administrative work
- participation in AFPs should be voluntary for clinicians now in place, but new recruits should join the AFP
- pre-existing alternative funding arrangements must be accommodated into the full site AFPs as they develop, and equity in further AFP development should include those already in place at the Hospital for Sick Children in Toronto and in Kingston

The overarching objective of Phase 1 of the alternative funding project was, in a single phrase, to stabilize academic health science centres. Although Phase 1 is only what might be called an introductory plan of partial alternative funding, it has succeeded in moving toward this objective. It has facilitated the creation of governance structures, recognized the special needs of AHSCs, begun the process of compensating AHSC clinicians for academic and special clinical activities and, most importantly, created an environment conducive to further negotiations that could lead to mature AFPs such as those that have already been so successful in the province of Ontario and elsewhere in North America.

There is general willingness to move ahead towards full alternative funding plans, given a clear policy direction for the Ministry to pursue this direction and the necessary process of negotiations. Achieving an appropriate financial package will be critical to achieving a final buy-in by physicians.

On the basis of this evaluation and previous experience with alternative funding, the successful negotiation of full AFPs in the AHSCs is likely to lead to stability of personnel, facilitated recruitment, predictability of budgets, enhancement of academic output, more appropriate clinical activity, especially in the areas of tertiary and quaternary care, alignment of Ministry, hospital and university objectives, and appropriate adjustment of incentives. Above all this could lead to positive change in the attitudes, culture and relationships among the various groups as true partners in the complex joint enterprise of academic medicine.

2004.2 Research Team on Interdisciplinary Education for collaborative patient centred practice. Interdisciplinary education for collaborative patient-centred practice: Research and Findings Report: Health Canada Feb 20, 2004

Across Canada, there has been much dialogue about the affordability and sustainability of the country's health system for more than a decade. As there are many facets to health system renewal, one of the goals of the First Ministers of Health is to achieve an integrated and interdisciplinary approach to primary care.¹ This approach would ensure timely access to appropriate health care providers, 24 hours a day, 7 days a week for all Canadians who require health care services regardless of where they live. The 2003 First Ministers' Accord on Health Care Renewal provided the direction for change. The consensus was that fundamental changes are necessary in order to deliver an effective primary health care system that would see improvements to continuity and coordination of care.

Under this direction, the 2003 First Ministers Health Accord identified that changing the way health professionals are educated is a key component of health system renewal. This change will be mobilized through the development and implementation of an initiative on interdisciplinary education for collaborative patient-centred practice (IECPCP). A team of health researchers with expertise and experience in the field of interdisciplinary education and collaborative practice was assigned the task of examining this issue. The team explored current national and international trends impacting interdisciplinary approaches to primary health care, reviewed existing models of interdisciplinary education and collaborative patient-centred care practice frameworks and provided an analysis of their findings to determine what Canada must do to advance IECPCP in our health care system. Under the guidance of the National Expert Committee (NEC) on Interdisciplinary Education for

Collaborative Patient-Centred Care and the Office of Nursing Policy of Health Canada, the research team proposed recommendations that take into consideration the current realities both at the policy and organizational level. It is hoped that the recommendations can assist in driving interdisciplinary health care change forward.

The research team explored both successful and unsuccessful interdisciplinary education and collaborative practice initiatives within health care practice settings and academic institutions. The findings from a literature review and environmental scan conducted for this report provided the necessary information to develop a framework to define the essential features and determinants for IECPCP.

The report covers:

- Current trends of interdisciplinary education for collaborative patient-centred practice in Canada and abroad and what are best practices for patient outcomes.
- A review of existing studies on the effects of interdisciplinary education and collaborative practice for quality of care and patient outcomes.
- Key features in the relationship between, and elements for, successful interdisciplinary education and collaborative practice models.
- The barriers to implementing interdisciplinary education and collaborative practice and descriptions of change management strategies to overcome these barriers.
- The enablers that influence interdisciplinary education and collaborative practice.
- Current policies, programs and strategies in health and education that support IECPCP.
- Recommendations on how to advance IECPC in Canada including research priorities.
- A conceptual framework to consider the essential elements and determinants for IECPCP based on available evidence and theoretical considerations.

A database is included with this report highlighting examples of interdisciplinary education and collaborative practice initiatives that currently exist in Canada and abroad. As well, a listing of published articles is provided.

Findings and recommendations of this report will be used as the basis for further deliberations by the First Ministers of Health, the NEC as well as Health Canada as a priority for health system renewal.

2004.3 Shortt SED., Stanton S. Does service “leak” to the fee-for-service sector under an alternative funding method? Experience at a Canadian Academic Health Center. Research in Healthcare Fin Manag 2004;9:21-28

This study was designed to determine whether shifting specialists from fee-for-service practice to annual block funding at an academic health center in Ontario, Canada, would be accompanied by shifts in some of the services provided in the center to specialists

who remained in the fee-for-service sector. A data set of the procedural workload was collected for four specialties (Cardiology/Cardiothoracic Surgery, Obstetrics/Gynecology, Orthopaedics, and Urology). Catchment areas were defined for the study center, the four other academic health centers in the province, and for nearby hospitals in the study center's region, using patient postal codes from provincial health insurance data. Patient volumes and patterns of service provision were compared for each provider specialty for 2.5 years before and after the change in funding. The study found no clear trend in migration of care to other centers following initiation of a non-fee-for-service payment plan at an academic health center.

2004.4 Chervenak FA., McCullough LB. An ethical framework for identifying, preventing, and managing conflicts confronting leaders of academic health centers. Acad Med 2004;79:1056-1061

Leaders of academic health centers (AHCs) hold positions that by their very nature have a high potential for ethical conflict. The authors offer an ethical framework for identifying, preventing, and managing conflicts in the leadership of AHCs. This framework is based on and implements both the ethical concept of AHCs as fiduciary organizations and also the legitimate interests of various stakeholders. The authors describe practical steps that can be tools for the preventive-ethics leadership of AHCs that enable leaders to avoid strategic ambiguity and strategic procrastination and replace these with transparency. The ethical framework is illustrated by applying it to an organizational case study. The major contribution of the ethical framework is that it transforms decision making from simply negotiating power struggles to explicitly identifying and making ethical decisions based on the legitimate interests and fiduciary responsibilities of all stakeholders.

2004.5 Whitcomb M.E. Academic health centers: Sustaining the vision. Acad Med 2004;79:1015-1026

Full Text:

Just a few short years ago, prominent individuals within the academic medicine community were predicting a rather gloomy future for academic health centers (medical schools and their associated teaching hospitals).¹⁻³ Their predictions were based on the belief that academic health centers (AHCs) would not fare well in the emerging health care delivery environment, primarily because managed care organizations would be unwilling to pay the extra costs associated with providing patient care in institutions that were also conducting education and research programs. In addition, federal policymakers were intent on decreasing over time the level of funding teaching hospitals were receiving through the Medicare program's Indirect Medical Education Adjustment. Those concerns led the leaders of some AHCs to adopt very aggressive strategies for positioning themselves more favorably within their local health care markets. Without a doubt, the most dramatic of those strategies were the mergers that occurred between teaching hospitals and other hospitals or health care organizations.^{4,5}

Needless to say, the widespread closures of medical schools and teaching hospitals that were being hinted at did not occur. Quite the contrary: available evidence suggests that many AHCs are substantially better off financially now than they were during the 1990s.

One could conclude that the favorable financial status of these institutions validates the aggressive strategies that their leaders adopted in response to the market forces operating at the time. More important, however, is the fact that the threat to the financial viability of AHCs posed by managed care was greatly exaggerated.

Be that as it may, there was a positive side to the perceived threat to the continued viability of AHCs. The threat prompted individuals within the academic medicine community, as well as others concerned about the future of academic medicine, to seek a better understanding and appreciation of the very nature of AHCs. Thoughtful individuals began asking two very important questions: What had these institutions become in recent years? And were the institutions being true to their unique missions? In many respects, it was those questions that prompted the Commonwealth Fund and the Institute of Medicine to convene special task forces to examine the future roles of AHCs in the 21st century.^{6,7}

In my view, the attention focused on the nature of AHCs has been a very good thing. It has prompted those in leadership positions to examine more closely the environments of the institutions they lead. And in doing so, they are seeking to understand how the environments and cultures of their institutions affect those who are there to receive care (patients) and those who are there to learn how to provide care (health professions students, including residents). During the peak of the concerns being expressed about the future of AHCs, Roger Bulger, president of the Association of Academic Health Centers, wrote that the greatest challenge facing the AHC community was not to solve the perceived financial or organizational crises the institutions appeared to be facing, but instead to restore the marriage between humanistic concerns and scientific and technical excellence in health care delivery practices.⁸ He suggested that for the institutions to survive as “legitimate” AHCs, they needed to become teaching and learning institutions that reflected the characteristics of the therapeutic clinician. He went on to say that the institutions should define goals and set standards that would guide their efforts to achieve that goal.

This issue of the journal includes seven articles that provide evidence that AHCs are taking seriously the need to examine themselves and the impact they have on patients and learners. Three of these articles—by Bellin et al., Agrawal et al., and Wazana et al.—provide insight into what institutional leaders are doing to address growing concerns about the relationships that exist between representatives of the pharmaceutical industry and students and residents receiving training in medical schools and teaching hospitals—relationships that may adversely affect their future prescribing practices. Three others—those by Wander and Malone, Chervenak and McCullough, and Fife and colleagues—address challenging ethical issues that institutional leaders need to focus on as they strive to ensure that their business and management practices are always consistent with the underlying mission of their institutions. And finally, Delva and her colleagues suggest that the very nature of the clinical environment that students and residents are exposed to may affect their learning in ways not previously appreciated.

There is no way to know how many AHCs are presently focusing on the kinds of institutional environmental issues represented in the articles published this month. Based on the experience I have gained during frequent visits to AHCs, I believe this focus is becoming widespread. Granted, it takes different forms in different institutions, and is more pronounced in some than in others. But I believe that an increasing number of the leaders of academic

medicine are asking serious questions about how the environments of medical schools and teaching hospitals are affecting the individuals who work there, the students who are there to learn, and the patients who are there seeking care.

Of course, none of those aspirations will have practical meaning if, in the end, the institutions are not financially viable. But one of the lessons we all should have learned from the experiences of recent years is that it is important to make sure that the assessment of financial viability is based on good data and logic, and that expressions of financial insolvency are not used to rationalize the adoption of aggressive strategies that put the institution at even greater risk. In the end, all management decisions should be required to meet the test set forth by Chervenak and McCullough: Is the action under consideration consistent with the institution's mission, or is it being considered solely to increase the institution's revenue and profits? And if a particular decision is deemed necessary, how will it affect the lives of the individuals who work, learn, and receive care there? We should all be striving to make AHCs the kinds of institutions they must be if they are to remain viable teaching and learning institutions in the years ahead.

On a day-to-day basis, everyone is likely to benefit if institutional leaders follow the recommendations set forth by Tom Inui in the impressive report he wrote at the end of his time as a Petersdorf Scholar-in-Residence at the Association of American Medical Colleges (AAMC).⁹ And in keeping with Tom's call to action, can anyone seriously doubt that everyone involved will not benefit from striving to make AHCs the kind of institutions envisioned by Roger Bulger and others?

Michael E. Whitcomb, MD

2004.6 Allan J, Barwick TA, Cashman S, Cawley JF et al. Clinical prevention and population health: Curriculum framework for health professions. Am J Prev Med 2004;27:471-476

The Clinical Prevention and Population Health Curriculum Framework is the initial product of the Healthy People Curriculum Task Force convened by the Association of Teachers of Preventive Medicine and the Association of Academic Health Centers. The Task Force includes representatives of allopathic and osteopathic medicine, nursing and nurse practitioners, dentistry, pharmacy, and physician assistants. The Task Force aims to accomplish the Healthy People 2010 goal of increasing the prevention content of clinical health professional education. The Curriculum Framework provides a structure for organizing curriculum, monitoring curriculum, and communicating within and among professions. The Framework contains four components: evidence base for practice, clinical preventive services-health promotion, health systems and health policy, and community aspects of practice. The full Framework includes 19 domains. The title "Clinical Prevention and Population Health" has been carefully chosen to include both individual- and population-oriented prevention efforts. It is recommended that all participating clinical health professions use this title when referring to this area of curriculum. The Task Force recommends that each profession systematically determine whether appropriate items in the Curriculum Framework are included in its standardized examinations for licensure and certification and for program accreditation.

2004.7 Betancourt JR, Maina AW. The Institute of Medicine Report “unequal treatment” Implications for academic health centers. Mt Sinai J Med 2004;71:314-321

Background: The United States has achieved dramatic improvements in overall health and life expectancy, largely due to initiatives in public health, health promotion and disease prevention. Academic health centers have played a major role in this effort, given their mission of engaging in research, educating health professionals, providing primary and specialty medical services, and caring for the poor and uninsured. However, national data indicate that minority Americans have poorer health outcomes (compared to whites) from preventable and treatable conditions such as cardiovascular disease, diabetes, asthma, cancer and HIV/AIDS. Two factors contribute heavily to these racial and ethnic disparities in health: minorities are subjected to adverse social determinants, and they are disproportionately represented among the uninsured. In the last twenty years, however, the literature has highlighted the fact that racial and ethnic disparities occur not only in health, but also in health care. The Institute of Medicine Report, “Unequal Treatment.” The Institute of Medicine (IOM) was asked to determine the extent of racial and ethnic disparities in health care. Their report, entitled “ Unequal Treatment,” found that racial and ethnic disparities in health care do exist, and that many sources, including health care systems, health care providers, patients and utilization managers, are contributors.

Recommendations from “Unequal Treatment”: Implications for Academic Health Centers. The IOM Report, “Unequal Treatment,” provides a series of recommendations to address racial and ethnic disparities in health care, targeted to a broad audience (the executive summary and full IOM Report can be found at www.nap.edu under the search heading “Unequal Treatment”). Several of the recommendations speak directly to the mission and roles of academic health centers, and have clear and direct implications for patient care, education, and research. These recommendations include collecting and reporting health care access and utilization data by patient’s race /ethnicity, encouraging the use of evidence-based guidelines and quality improvement, supporting the use of language interpretation services in the clinical setting, increasing awareness of racial/ethnic disparities in health care, increasing the proportion of underrepresented minorities in the health care workforce, integrating cross-cultural education into the training of all health care professionals, and conducting further research to identify sources of disparities and promising interventions.

Conclusion: “Unequal Treatment” provides the first detailed, systematic examination of racial/ethnic disparities in health care, and provides a blueprint for how to address them. The report’s recommendations are broad in scope, yet have direct implications for academic health centers.

2004.8 Belar CD.The future of education and training in academic health centers. Jr Clin Psych in Med Settings 2004;11:77-82

National reports have recommended additions to the core competencies that should be required of all health disciplines, including psychology. The recommendations will affect the education and training of health professionals at academic health centers (AHCs). There will be more focus on training for competence in patient-centered care, evidence-based care, interdisciplinary teamwork, informatics, and continuous quality improvement. Other trends

that will affect training of psychologists and other health disciplines in AHC settings include emphasis on better ways to assess the quality of clinical skills, support for improvement of teaching and training, and an increase in educators' status.

**2004.9 Stevens LM, Lynn C, Glass RM. Academic health centers.
JAMA 2004;292:1134**

Full Text:

Physicians undergo long and rigorous training before being allowed to practice medicine. Part of this medical education involves direct treatment of patients under the supervision of experienced physicians, especially at teaching hospitals—hospitals that are affiliated with medical schools and serve as “classrooms” for physicians, nurses, and other health care workers in training. At teaching hospitals, treatment plans are approved by an experienced physician and patients have the advantage of being cared for by a team of doctors, students, and nurses. The September 1, 2004, issue of JAMA is a theme issue on medical education. This Patient Page is adapted from one originally published in the September 5, 2001, JAMA medical education theme issue.

ACADEMIC HEALTH CENTERS

Teaching hospitals often are part of academic health centers (AHCs), which also may include medical and nursing schools, clinics, emergency departments, freestanding outpatient care centers, hospices, and individual and group practices staffed by a mix of senior physicians and medical personnel in training. In addition to medical education, they provide

- **Research**—Academic health centers perform many kinds of health-related research. This research has led to new ways of preventing, diagnosing, and treating illnesses that affect millions of adults and children. Research facilities also contribute to local economies by providing high-paying, skilled jobs.
- **Care for the underserved**—More than half of the people admitted to AHCs are patients covered under Medicaid or people with little or no access to health care and often no medical insurance, such as migrants, immigrants, battered women, and uninsured children. Without AHCs, providing care for medically underserved patients would be difficult or would not occur.
- **Specialized treatment**—Patients who obtain treatment in AHCs often have severe and rare medical conditions. The staff at AHCs often are expert in treating complicated illnesses and performing complex surgeries and other medical procedures.
- **Community service**—Academic health centers provide community health clinics, health advocacy, health fairs (including screening for diabetes or other diseases, vision testing, and blood pressure testing), vaccinations, and other preventive services.

Academic health centers are essential for educating physicians and other medical staff and for providing first-rate health care and medical research in the United States.

2004.10 Kligler B, Maizes V, Schachter S, Park CM et al. Core competencies in integrative medicine for medical school curricula: A proposal. Acad Med 2004;79:521-531

The authors present a set of curriculum guidelines in integrative medicine for medical schools developed during 2002 and 2003 by the Education Working Group of the Consortium of Academic Health Centers for Integrative Medicine (CAHCIM) and endorsed by the CAHCIM Steering Committee in May 2003. CAHCIM is a consortium of 23 academic health centers working together to help transform health care through rigorous scientific studies, new models of clinical care, and innovative educational programs that integrate biomedicine, the complexity of human beings, the intrinsic nature of healing, and the rich diversity of therapeutic systems. Integrative medicine can be defined as an approach to the practice of medicine that makes use of the best-available evidence taking into account the whole person (body, mind, and spirit), including all aspects of lifestyle. It emphasizes the therapeutic relationship and makes use of both conventional and complementary/alternative approaches. The competencies described in this article delineate the values, knowledge, attitudes, and skills that CAHCIM believes are fundamental to the field of integrative medicine. Many of these competencies reaffirm humanistic values inherent to the practice of all medical specialties, while others are more specifically relevant to the delivery of the integrative approach to medical care, including the most commonly used complementary/alternative medicine modalities, and the legal, ethical, regulatory, and political influences on the practice of integrative medicine. The authors also discuss the specific challenges likely to face medical educators in implementing and evaluating these competencies, and provide specific examples of implementation and evaluation strategies that have been found to be successful at a variety of CAHCIM schools.

2004.11 Rodin J. A Revisionist View of the Integrated Academic Health Center. Acad Med 2004;79:171-178

Like many academic health centers that had expanded aggressively during the 1990s, the nation's first vertically integrated academic health center, the University of Pennsylvania Health System, was profoundly challenged by the dramatic and unanticipated financial impacts of the Balanced Budget Act of 1997. The author explains why-although Penn's Health System had lost \$300 million over two years and its debts threatened to cause serious financial and educational damage to the rest of the University-Penn chose to manage its way out of the financial crisis (instead of selling or spinning off its four hospitals, clinical practices, and possibly even its medical school). A strategy of comprehensive integration has not only stabilized Penn's Health System financially, but strengthened its position of leadership in medical education, research, and health care delivery. The author argues that a strategy of greater horizontal integration offers important strategic advantages to academic health centers. In an era when major social and scientific problems demand broadly multidisciplinary and highly-integrated approaches, such horizontally integrated institutions will be better able to educate citizens and train physicians, develop new approaches to health care policy, and answer pressing biomedical research questions. Institutional cultural integration is also crucial to create new, innovative organizational structures that bridge traditional disciplinary, school, and clinical boundaries.

2004.12 Calleson DC, Seiffer SD. Institutional collaboration and competition in community-based education. *Jr Interprof Care* 2004;18:63-74

We sought to determine whether competition for community-based training sites exists among health professions schools, and to examine faculty and senior administrators' perspectives on institutional collaboration for community-based education. Eight academic health centers (AHCs) in the USA were selected by objective criteria for their significant community involvement. Chief executive officers, vice chancellors, deans, and the individuals responsible for community-based education, research and community service responded to written surveys. The overall response rate was 79% (n = 91). Responses were subjected to quantitative and qualitative analyses. Leaders of community-based education reported that 'competition for community-based training sites' is a barrier to community involvement. 'Competition for community-based training sites' was positively related to 'call for increasing percentage of graduates to enter primary care careers' (0.30, $p < 0.01$) and negative related to 'collaboration exists between the community and your school/AHC' (-0.28 , $p < 0.05$). Respondents reported that a moderate level of collaboration across schools exists. While medical school respondents reported having collaborative relationships with other health professions schools and with the community, nursing respondents reported medicine's performance at a significantly lower level. Public health and nursing faculty reported that they are competing with medical schools for sites they had traditionally used for their students. Competition for sites is an unintended outcome of the increased emphasis on community-based education in health professions curricula. We recommend AHCs form joint committees across schools to effectively address community-based sites as a limited resource, and to consider a wider range of community-based organizations as training partners.

2004.13 Litaker D, Cebul RD, Masters S, Nosek T, Haynie R, Smith CK. Disease prevention and health promotion in medical education: Reflections from an academic health center. *Acad Med* 2004;79:690-697

Purpose: It is unclear whether academic health centers are successfully addressing societal needs and expectations by preparing students with knowledge and skills in disease prevention and health promotion. The authors assessed whether students were exposed to key content in these areas and whether they felt this exposure was adequate.

Method: All components of the first three years of the Case Western Reserve University (Case) curriculum were examined in 2001 to create a curricular map, using competencies in disease prevention and health promotion identified by the Association of Teachers of Preventive Medicine (ATPM) as a template to assess the scope of instruction. Case students' United States Medical Licensing Examination (USMLE) Step 2 subscores in preventive medicine and health maintenance from 1994 to 2000 and graduating seniors' assessment of the adequacy of their training were compared to national data from the Association of American Medical Colleges' 2000 Graduation Questionnaire (GQ).

Results: Most content areas identified by ATPM were present in the Case curriculum and were offered frequently in a variety of educational venues over the first three years. USMLE scores increased nationally and at Case from 1994 to 2000 and Case students'

perception of training adequacy in preventive medicine and health promotion was comparable to national ratings from the 2000 GQ.

Conclusions: Broad and frequent exposure to disease prevention and health promotion core competencies has value, but may not sufficiently prepare students to deliver health-promoting services confidently. Creative curricula high-lighting prevention's relevance throughout clinical practice and incorporating formal opportunities to apply knowledge and build experience may result in greater success.

2004.14 Davies S. Academic Health Organisations: An International Comparative Study Project team and contacts 2004; University of Essex Website (www.essex.ac.uk/hhs/research/projects)

Academic Health Organisations: An International Comparative Study

Project team and contacts

Stephen Davies

Dept of Health and Human Sciences, University of Essex

Funder

The Commonwealth Fund (New York City)

Background

Complex relationships between higher education institutions and health care providers are found in all developed countries. But these relationships are conceptualised very differently in different national settings, and this is reflected in public policy. The UK and USA present a marked contrast in this respect.

Objectives

To investigate in depth the contrasting environment for academic health organizations in the UK and the USA. Why are American academic health centres so much more prominent in public policy and academic debate than their British equivalents? Can this be explained by objective differences in mission activities, organization or purpose? Or does an adequate explanation also require an exploration of cultural and ideological differences between national settings?

Methods

Comprehensive quantitative analysis of mission activities, using secondary data, supplemented by comparative case studies from both national settings, principally using qualitative analysis of interview transcripts. Interviews utilised an investigative framework developed using the published literature on academic health organizations and covering the following areas: finance, governance, integrated delivery systems, primary care integration, managing markets, workforce development, innovation and leadership.

For the quantitative analysis USA: a complete universe of 125 American Academic Health Centers (AHCs) selected using AAMC definitions. For the quantitative analysis UK: a

universe of 17 English AHC equivalents based on UK University Hospitals Forum criteria. For the comparative case studies: one urban conurbation and one rural/provincial AHC for each country (i.e. four in all).

Findings

In terms of governance and organization, American AHCs appear less homogeneous as a group than their British equivalents. This picture is reinforced by quantitative analysis of indicators for the three mission activities of patient care, education and research. British AHCs are less differentiated from the rest of the health care system than their American equivalents and mission activities are more strongly correlated. The case studies revealed a number of challenges that are common to AHCs in both countries: financing, governance and the role of academic centers in integrated delivery systems. Other issues were prominent in one national setting, but not in the other. American AHCs were concerned with issues of innovation, leadership and physician-hospital integration. British AHCs were more pre-occupied with integration between primary and secondary care, managing fragmented markets and workforce development.

The analysis supports the view that differences in attitudes towards AHCs between the two countries can not be explained by differences in what they do, nor by differences in how they are organized and governed. AHCs also face common challenges across national borders. A full explanation requires reference to a wider set of historical, social, cultural and political considerations, which are nationally specific.

Publications to date

Davies, S. (2002) 'Ideology and Identity. A Comparative study of academic health organisations in the UK and USA' Nuffield Trust, London

Davies, S. and Smith, T. (2004) 'Managing university clinical partnership: learning from international experience' Higher Education Management and Policy 16(2) OECD, Paris

Conference presentation:

Davies, S (2003) 'Academic health organisations: an international perspective' Academy Health Annual Research Meeting, Nashville, TN

2004.15 Casebeer A. Regionalizing Canadian healthcare: the good--the bad--the ugly. HealthcarePapers 2004;5:12-31

In their lead paper, Lewis and Kouri leave us with a revealing and perplexing picture of Canadian experience with healthcare regionalization. Take-home messages are that regionalization is riddled with dilemmas, saddled with problems and tasked to find solutions current incentives do not encourage. And yet this mode of restructuring healthcare endures through peaks and flows of reconfiguring and renaming exercises, rarely discarded completely and apparently making some positive differences. While this peer commentary shares many of the lead authors' perspectives, it suggests that if we want to better understand the role of regionalization as a structure supporting organizational change, then there is value in broadening some investigative spaces and some analytical frames when trying to understand this seemingly endless restructuring effort. The commentary begins

by arguing that we should seek transferable lessons and lenses more widely and more often, as regionalization is neither uniquely Canadian nor solely healthcare oriented. The remainder of the paper revisits some of the Lewis and Kouri terrain, viewing in turn the good, the bad and the ugly aspects of regionalization and reflecting on how these characteristics influence change opportunities both in practice and for research.

2004:16 Lewis S. Kouri D. Regionalization: making sense of the Canadian experience. HealthcarePapers 2004;5:12-31

This paper revisits the purposes and achievements of regionalization, a decade after its widespread implementation across Canada, and considers to what extent changes in healthcare concepts, emphasis and delivery can reasonably be attributed to it. The authors address four main questions. What, conceptually, is regionalization in healthcare, and what distinguishes it as a structure? How was regionalization intended to contribute to the achievement of the goals for the health system articulated in the 1980s and 1990s? How has regionalization been implemented in Canada, and how have these factors affected its potential to achieve its intended impact? And finally, with the experience gained over the last decade, how might we now (re)design regionalization to better contribute to health system goals? In Canada, regionalization of healthcare has entailed more than devolution and decentralization of services from provincial governments to regional authorities. It included consolidation of authority from local boards and agencies, and some centralization of services. Regionalization was the remedy proposed for the diagnosis of fragmentation and incoherence made by commissions across the country in the 1980s. Regionalization addressed the organizational dimensions of the perceived problems, but provincial governments added goals unrelated to structural change to its mandate. The authors assess the potential impact of regionalization on health system goals and take stock of current Canadian circumstances. Even where regionalization's impact is theoretically high, there are many practical limits to its effect. Although it can facilitate or impede change, in the end the will and actions of provincial governments, providers and other actors in the health system are fundamental to attaining more substantive goals. Many health reform goals require nothing less than a transformation of how society views health, and in the culture of healthcare delivery. Further, the authors argue that the implementation of regionalization in Canada has been limited. Devolution has typically been halting and provisional; there has been little stability; and there have been constraints on the ability to act. These limitations have reduced its potential effect. The authors conclude with proposals for increasing regionalization's contribution to health reform goals. These include a more stable and transparent provincial-RHA relationship, information and measures to better align resources to needs, increased regional-level system integration and changes to organizational culture and practice in the health system.

2004.17 Curran V. Interprofessional Education for Collaborative Patient-Centred Practice Research Synthesis Paper
<http://www.hc-sc.gc.ca/hcs-sss/hhr-rhs/strateg/interprof/synth-eng.php>

The purpose of this paper is to summarize the main themes emerging from the research report and discussion papers which have been commissioned to date as part of the IECPCP initiative. The 2004 literature review and environmental scan report prepared by Oandasan et al., as well as the discussion papers prepared by Brown, Cook, Curran, D'Eon, Gilbert,

Hall, Lahey and Currie, and Steinert (2004) were reviewed in preparing this synthesis paper. The organization of the paper is based upon D'Amour and Oandasan's Conceptual Model of Interdisciplinary Education for Collaborative Patient-Centred Care (Figure 2). The key factors, determinants and elements which emerged from the review of the research report and discussion papers were presented and discussed in relation to this framework. As an overview of these key themes, Table 4 presents the main factors, determinants and elements as they relate to the micro, meso and macro levels identified by D'Amour's and Oandasan's framework. Each of these themes was discussed in turn in previous sections of the synthesis paper. Readers are advised to consult the specific report or discussion paper for further elaboration and description.

2004.18 PRÉSENTATION DU COMITÉ DE SUIVI AU COMITÉ DIRECTEUR MEQ- UNIVERSITÉS-MSSS SUR L'ANALYSE DES BUDGETS AFFECTÉS AU SOUTIEN À L'ENSEIGNEMENT ET À LA RÉMUNÉRATION DES MÉDECINS PROFESSEURS CLINIQUES May 2004

L'an dernier, dans le cadre des travaux réalisés par le *Groupe de réflexion sur la qualité de la formation médicale*, une collecte de données a permis d'évaluer les ressources requises par les facultés de médecine pour former leurs étudiants. Ainsi, afin de mieux comprendre les effets de la croissance des effectifs étudiants sur les conditions de la formation médicale, les membres de ce comité ont décrit brièvement le modèle de formation préconisé par les quatre facultés de médecine québécoises, afin de mieux en saisir les particularités.

L'évolution des méthodes de formation médicale au Québec (études pré et post doctorales) a suivi un développement semblable à celui que l'on a pu observer ailleurs en Amérique du Nord. Ainsi, au cours des dernières années, les programmes d'études médicales ont su adapter la formation aux besoins de santé de la population et de l'évolution des modes de distribution des soins tout en tenant compte de l'évolution des connaissances et des innovations tant scientifiques que pédagogiques. À partir d'un certain nombre de tendances reconnues et observées partout en Amérique du Nord, on peut ainsi dégager et illustrer, le cheminement qu'ont pris ou que prendront les facultés de médecine québécoises pour assurer le maintien de la qualité de leurs programmes de formation, et ce, malgré les fluctuations de clientèles.

2003

2003.1 Levine DM, Bone LR, Hill MN, Stallings R et al. The effectiveness of a community/academic health center partnership in decreasing the level of blood pressure in an urban African-American population. *Ethnicity and disease* 2003;13:354-361

2003.2 Committee on the roles of academic health centres in the 21st century. *Academic Health Centres: Leading change in the 21st century.* 2003; National Academy Press NAP home page at www.nap.edu

Health care is changing in very fundamental and important ways. Biomedical and other technological advances create a constantly expanding knowledge base to be harnessed and applied so its benefits can reach people. Our concepts of medicine, health, and

preventive care will be fundamentally redefined as knowledge from human genome research and other new sciences offer new treatments and the ability to customize care to meet individual needs and characteristics. Peoples' health needs are shifting from the treatment of acute illness to the management of chronic conditions, which are the leading cause of illness, disability, and death, and account for the majority of health resources used today. Expanding technology and knowledge provides opportunities for the health care system to achieve goals of much higher levels of quality and safety.

Academic health centers (AHCs) play a particularly important role in responding to these forces because they are the places that train health professionals, conduct re-search that advances health, and provide care especially to the most ill and poorest populations. The IOM Committee on the Roles of Academic Health Centers came together in 2001 to consider how AHC roles in education, research and patient care will need to adapt if they are to continue to meet the public's needs in the coming decades. For this study, an AHC is the constellation of functions and organizations that are committed to improving the health of patients and populations through the integration of their roles in research, education, and patient care to produce the knowledge and evidence base that becomes the foundation for both treating illness and improving health.

This report provides a two-part plan to guide the types of adaptations that will be required of AHCs in the future. The first part identifies actions by AHCs as well as public policy steps to transform each of the AHC roles to respond to the trends identified above. The public policy actions are intended to spur AHCs to undertake the types of changes that will be needed. In the area of education, Congress should create a dedicated fund to support innovation in the education of health professionals; in response, AHCs should reform the methods, approaches, and settings used in clinical education. In the area of patient care, public and private payers, and foundations should support experimentation to redesign processes of care to improve health for both patients and populations; in response, AHCs will need to create the structures and team approaches in care to focus on improving health. In the area of research, federal funding agencies should support collaborations by the mix of scientists who do different types of research; in response, AHCs will need to examine how they can improve linkages across their research programs in biomedical, clinical, health services, and prevention research.

AHCs will not be able to take on the changes called for in each role with minor adaptations or by looking at each role in isolation from the others. Adding one more course to an already over-crowded curriculum or doing one more research study will not be sufficient. In taking on the challenges set forth, AHCs will need to recognize the interdependent and complementary nature of their traditionally independent roles within an overall context that encompasses a commitment to improving the health of patients and populations. Thus, the second part of the plan identifies three strategic management systems that all AHCs will need to establish to enable a more coordinated and cohesive system-wide view across its multiple roles and organizations — information systems to manage the information and knowledge that is used and produced by AHCs, accountability systems to establish and measure goals for change, and systems to develop and support AHC leadership.

The unique contribution of AHCs in the coming decades will lie in their ability to achieve an integration of their roles within medicine and across all health sciences, including public health, nursing, dentistry, pharmacy, and others, to improve the health of all Americans.

2003.3 Commonwealth Fund Task Force on Academic Health Centers. Envisioning the future of Academic Health Centres. Commonwealth Fund 2003 February at www.cmf.org.

A second major report was issued in 2003 by the Commonwealth Fund “*Task Force on Academic Health Centers. Envisioning the future of Academic Health Centres.*” The report noted that in the future, most academic health centres will specialize in certain missions or sub-components of those missions and very few AHCs will attempt proficiency in the wide ranges of clinical care, education and research. A wide range of recommendations were made in the report and the following provides a summary.

Recommendations for the Academic Health Centre Community

Organization and Management

- Lead application of technology to improve health care
- Develop organizational structures more responsive to the needs of the community
- Improve internal accounting capabilities and the management of funds supporting mission related work
- Develop performance measurement capabilities and train personnel to be open, with teamwork, accountability and patient centeredness
- Work with other AHCs and non-academic health care organizations to identify and establish best practices
- Continually assess the health care needs of their community (and nation) to incorporate resulting data into strategic planning

Research

- Develop rigorous, peer reviewed accountable procedures for delegating space and other research resources
- Develop interdisciplinary research structures and recruit leaders
- Give high priority and recognition to under-supported areas of biomedical science (behavioral, public health, informatics, clinical, management and health services research)
- Translate results of clinical research into clinical practice
- Manage relationships with industry that is accountable, protects the patient, maintains academic values and public trust

- Increase support and acknowledgement of faculty who participate in ethical issues in research and practice
- Play leadership role in ensuring the clinical research enterprise protects the welfare and rights of human participants in clinical investigation

Education

- Curricula should dramatically increase emphasis on life-long learning, teamwork, continuous improvement and measurements of clinical performance
- Develop capabilities to educate students on-line and remotely
- Develop use of simulation at all levels of educational experience
- Train and reward educators at the same levels as clinicians and researchers
- Develop performance measurement and accountability that promote continuous improvement in education
- Provide training to prepare researchers for the challenges of increasing complex and accountable research environment
- Provide leadership in training a culturally competent clinical and research workforce

Clinical Care

- Act decisively to improve safety, quality and efficiency of service provided with a continuous improvement process
- Invest in information technologies necessary to automate all appropriate clinical care processes, provide patients with secure access to their medical records and assist patients with self-care and medical decision making
- AHCs that fail to achieve best obtainable outcomes demonstrated by peer institutions should act decisively to improve outcomes or discontinue those clinical services

Vulnerable Populations

- Strive to ensure the quality and efficiency of care provided vulnerable populations is comparable to that available to other populations
- Actively work with partners in local communities to serve the needs of the poor and indigent patients
- Adopt specific programs to train staff at all levels to provide care that is culturally appropriate and responsive to the diverse needs of ethnically and racially varied populations

Recommendations for Public Policy

- Supporters of mission-related activities should move quickly to create alternative mechanisms to support AHCs mission expenses (should be open, accountable, predictable and administratively simple. Non-clinical expenses of mission related activities should be covered in-full by grants and other payments from public and private agencies.
- Academic Health Services Trust Fund – public authority that would provide explicit payments to AHCs that participate in public and merit goods that can not be supported effectively in private health care markets.
- Academic Health Services Advisory Committee – advise the federal government on the level and allocation of funds provided by the trust fund. It would be representative of AHCs, payers, insurers, providers and the general public.
- The advisory committee would lead an assessment and planning process to estimate national requirements for support of the clinical expenses associated with conducting research, teaching, high technology and specialized services and clinical innovations at AHCs and other eligible institutions. The task force has estimated these expenses would be \$11.4 billion.
- Public support for the clinical expenses associated with mission-related activities would reflect the institutions contributions to meeting the needs of local, regional and national needs for these services (quality, efficiency and quality). The committee and federal authorities would provide a single allocation to cover estimated clinical expenses associated with all missions as well as incentive payments.
- Governments at all levels should invest in research and development necessary to develop reliable and valid measurements of performance in mission related areas.
- Professional organizations representing AHCs should play a leadership role in helping AHCs meet the health care needs of the American people.

The report notes that the US health care system seems to be spiraling toward crisis. If the future is a reflection of the past, reactions to rising costs and ongoing concerns over access to care and quality of health services will present these institutions with new and unprecedented challenges—as well as opportunities—in the pursuit of their special missions. The U.S. health care system is once again experiencing double-digit cost inflation that, together with a slowing economy, will severely stress public and private purchasers of care and dramatically increase the number of uninsured people.

2003.4 Montague T, Cox J, Kramer S, Nemis-White J et al. Improving cardiovascular outcomes in Nova Scotia: A successful public/private partnership in primary healthcare. Hosp Quarterly 2003;spring:32-38

Broadly defined, disease or health management, is a focused application of resources to improve patient outcomes; its premise, things can get better. In particular, the gap between what best care could be and what usual care is, can be reduced, and consequently care and outcome can be improved. This paper reviews the evolution of the partnership/

measurement paradigm of disease management and considers its value in sustaining Canadian healthcare. Lessons from ICONS (Improving cardiovascular outcomes in Nova Scotia), a major public/private health partnership of physicians, nurses, pharmacists, patients and their advocacy groups, government and industry are highlighted.

Launched in 1997, ICON's proof of concept phase ended in 2002. Due to its positive impact on the cardiovascular health of the population and its integrated and accountable administrative process, ICONs became an operational program of the Nova Scotia Department of Health. This successful community-based partnership represents a major achievement in organizational behaviour in the arena of primary health care. It supports optimal care as evidenced-based and seamless, recognizing the patient as the nucleus. It should be considered for other disease states and constituencies where the goals of closing care gaps and delivering best health to the most people at best cost.

2003.5 Korner EJ, Oinonen MJ, Browne RC. The Power of Collaboration: Using Internet-Based Tools to Facilitate Networking and Benchmarking Within a Consortium of Academic Health Centers. J Med Systems 2003;27:47-56

The University HealthSystem Consortium (UHC) represents a strategic alliance of 169 academic health centers and associated institutions engaged in knowledge sharing and idea-generation. The use of the Internet as a tool in the delivery of UHC's products and services has increased dramatically over the past year and will continue to increase during the foreseeable future. This paper examines the current state of UHC-member institution driven tools and services that utilize the Web as a fundamental component in their delivery. The evolution of knowledge management at UHC, its management information and reporting tools, and expansion of e-commerce provide real world examples of Internet use in health care delivery and management. Health care workers are using these Web-based tools to help manage rising costs and optimize patient outcomes. Policy, technical, and organizational issues must be resolved to facilitate rapid adoption of Internet applications.

2003.6 Stanton S, Shortt SED. The influence of payment method on patterns of physician practice: Experience at a Canadian academic health center. Research in Healthcare Fin Manag 2003;8:43-58

This study takes advantage of a natural experimental setting to examine the impact that a change from fee-for-service payment to annual block funding had on surgical specialty practice at a Canadian academic health center in comparison to four other fee-for-services. Five years of administrative data for the five Ontario academic health centers were analyzed in this retrospective pre-post study. Four sentinel procedures, known to have a large discretionary component, were chosen for study. Clinicians were surveyed to identify potential confounders. Changes found in the center after the implementation of an alternative funding plan were similar to those found in the other four academic health centers in the province. Survey results indicated no experiential differences between centers. The authors concluded that changing the physician payment mechanism did not alter surgical practice patterns. These findings and this conclusion have important implications for health system design.

2003.7 Harris DL, DaRosa DA, Liu PL, Hash RB. Facilitating academic institutional change: Redefining scholarship. Family Med 2003;35:187-194

Background and Objectives: Academic institutions are typically resistant to change. Redefining scholarship is an important issue for academic health care institutions. This study examines the change process at institutions that have attempted to change the definition of scholarship.

Methods: Five medical schools were identified that had recently redesigned their promotion and tenure systems based on expanded definitions of scholarship. Interviews were conducted with a key leader in this effort. The interviews were designed to identify the forces and barriers involved in change, activities designed to secure faculty “buyin,” factors needed to sustain change, and advice that would help others who might be considering such an effort at their academic health centers. We organized the results of the interviews within a change leadership and management model.

Results: The responses to the survey questions fit well into the change model. Many of the responses were felt to be applicable to multiple stages of the change model.

Conclusions: The leaders of change from the study institutions, either by intention or intuition, identified key factors of their change process that fit well with the study model. Change leaders should include plans that follow an established model for institutional change in their strategy to change the definition of scholarship at their institution.

2003.8 MacLeod SM. Hospitals and academic health sciences centres: leaders or followers in health globalization? HealthcarePapers 2003;4:64-68

The overall impact of globalization on health outcomes is contentious, but there is no doubt that knowledge transfer and the extension of specific health interventions to developing countries promise extraordinary benefits. It has been suggested that improved information/communications technology and the creation of distributed hospital systems leading a virtual healthcare web will permit realization of the promise of globalization. It is argued in this commentary that such evolution will require a new model of shared governance in the healthcare system. The leading vision is most likely to come from academic institutions, researchers, health professionals and governments. The “super-hospital” of the future should be expected to play a key role as service provider and partner.

2003.9 Leggat SG, Tse N. The role of teaching and research hospitals in improving global health. HealthcarePapers 2003;4:34-38

Globalization is impacting on Hong Kong and Australia in different ways, but the experience of the public healthcare systems in both jurisdictions suggests a need for teaching and research hospitals to refocus from the management of international patients to better meet the needs for global health. Traditional globalization suggests a stockpiling of capital--a focus on improving global health suggests dismantling the stockpiles and sharing access to the necessary data, information, knowledge and discoveries to further develop local health expertise. Consistent with its position as a leading healthcare provider, the University Health Network (UHN) has been reflecting on the impact of increasing globalization on hospitals. The goals of the UHN paper on globalization are threefold - to suggest how the

external and internal environments of hospitals will change as a result of globalization; to suggest a role for hospitals in a globalized world; and to stimulate discussion and debate. Given our perspective, from the other side of the world, we are pleased to contribute to the discussion and debate but will limit our comments to the future role of teaching and research hospitals based on some of the experiences of Australia and Hong Kong. The citizens of Hong Kong have been acutely aware of the issue of globalization-the excellent deep-water harbour has ensured the position of Hong Kong as a major trading hub. Hong Kong has also had a continually evolving role as a financial centre and gateway to China, and with China's accession to the World Trade Organization the impact of globalization will be even greater. On the other hand, the citizens of Australia have lived with geographic isolation, relatively limited natural resources and a small population, all of which have limited their role in global trade and financial markets. However, both Hong Kong and Australia have seen recent benefits from the increasing speed of communication and information transfer and exchange. While it may still take close to a month for Australian practitioners to receive the hard copy of the journal in the mail, a electronic transfer is instantaneous. The globalization of knowledge and practice is one of the largest impacts of the Internet. With one of the most connected populations in the world, Hong Kong is very active in the sharing of knowledge with international experts.

2002

2002.1 Dixon JF, Wielgosz C, Pires ML

2002.2 Bernstein A. AHSCs: More important than ever in the century of health research. HealthcarePapers 2002;2:54-58

We are in the midst of a profound revolution in health research, a revolution being driven by our emerging understanding of a molecular basis of life and human disease. This revolution is creating a century of health research, characterized by the convergence of virtually all disciplines, from mathematics to social sciences and humanities. This convergence of disciplines is introducing radical changes and opportunities in the discovery and R&D process of health research.

Academic health sciences centres (AHSCs) are strategically placed to contribute to, and benefit from, this revolution. To that end, AHSCs require exceptional visionary leadership, a commitment to clinical and research excellence, a full appreciation of the complete tripartite mission of AHSCs, and the development of an outward-looking stance that includes the development of public policy. The federal government's clear and sustained commitment to health research, as demonstrated recently by the 15% increase to the Canadian Institute of Health Research budget, provides an important opportunity for AHSCs to demonstrate their crucial role in both the development of an innovative and cost-effective healthcare system and to Canada's broader social and economic agenda.

2002.3 Lozon JC, Fox RM. Academic Health Sciences Centres laid bare. Healthcare Papers 2002;2:10-36

Conclusion

The history, nature and current configuration of AHSCs across the country are different and at different stages of evolution. The notion of a common vision of an AHSC regarding its contribution to the health and education systems and the society that it serves is impractical. However, to draw some conclusions from the foregoing and to then suggest some structural and other recommendations is both worthwhile and necessary.

1. AHSCs are an enduring example of the triumph of shared commitments and goodwill over efficient organization and clear accountabilities. The extent to which they have endured in more or less the same form throughout their history serves as an example of how basic understandings and shared values can overcome organizational ambiguity and chronic low levels of confusion. However, it is precisely this shared value that makes them so hard to understand and difficult to change.
2. Each AHSC is different from another. This difference is apparent in the various priorities given to the common missions of service, education and research. It also reflects the various constellations of organizations and participants that have different degrees of authority. It is precisely these differences that preclude a cookie-cutter approach to organization and programs. Weiner et al. (2001) describe a typology by which AHSCs can be categorized and understood from an organizational perspective. They note eight different classifications and go on to note that they can be combined and changed over time. No wonder these entities defy common visions.
3. The impacts of health sciences disciplines other than medicine are submerged in the AHSC. To date, they have not played a major role in the AHSC for a variety of reasons.
4. AHSCs have suboptimal relationships with their parent universities and with the various government agencies that contribute to their funding and regulation. These relationships are characterized by a lack of understanding on all parts. Traditional notions of accountability are therefore foreign in the context of these crucial relationships.
5. AHSCs are only a component of both the health and education systems, and any assumption that they should take a leadership role beyond their mission of service, care and research should be approached cautiously. Participants in the AHSC often advance these notions, and it is noteworthy that these ideas do not come from governments or other providers. When and if major system change is initiated, the AHSC must be seen as a participant and a stakeholder but probably not the generator of new models of delivery or funding.
6. The forces facing AHSCs, while profound, are no more frightening or threatening than those they have endured. In terms of the key factors facing AHSCs, the most relevant are related to the need for greater accountability, alternative physician funding plans and the continuing sorting out of academic priorities in a regionalized delivery model.
7. Given the size of our country and the real need for national programs around human resource planning and research (the latter already being reinvigorated), there should

be much greater interaction between AHSCs and the federal government, while simultaneously preserving the current relationships at the provincial level.

Contained within AHSCs are examples of the very best and also the most worrisome aspects of the Canadian healthcare system. Everyday acts of compassion in the most sophisticated healthcare environment in existence are routinely performed with exceptional skill. Clinical service is at its highest level, and some of the most advanced educational processes are at work. Yet, basic elements of accountability and transparency are underdeveloped or nonexistent. In an era of public sector financial restraint, growth pressures have never been greater. The old Dickens quote, "It was the best of times, it was the worst of times," comes to mind. What is, however, more important is how AHSCs can take this moment to transform themselves to make even greater contributions to our health system and the society it services.

2002.4 ON Prov Working Grp on Alternative Funding Plans. Alternate funding plans for academic health sciences centres. ON Government Health Report. February 2002.

We are pleased to provide the Report of the Provincial Working Group (PWG) on Alternative Funding Plans (AFPs) for Academic Health Science Centres (AHSCs). Since the appointment of the members in August 2001, the PWG has worked intensively for close to five months. We believe that the resulting Report charts a clear path towards the development and implementation of AFPs in Ontario's AHSCs. We also believe that the AHSC community will embrace the report as a practical guide to AFP development and implementation and accordingly we encourage the Ministry to begin the implementation phase as soon as possible.

2002.5 MacLellan K. Begin with ethics. The rest will follow. HealthcarePapers 2002;2:46-53

Solutions to some of the challenges facing Academic Health Sciences Centres (AHSC) might be found in expanding their mandate from the traditional tripartite definition – teaching, research and patient care – to include an equally important fourth mandate – responsibility to the community. Indeed, it could be argued that the current movement towards community-based teaching will exert such funding and organizational pressure on AHSCs that fundamental change will be forced upon them.

2002.6 Smith ER. Academic Health Sciences Centres: A View from the Academy. HealthcarePapers 2002;2:38 - 45

Academic Health Sciences Centres have provided and continue to provide valuable service to society. However, the lack of a clear mandate, structure, governance and administration results in their full potential not being met. As the Canadian healthcare system undergoes the reform that must occur to make the publicly funded system sustainable into the future, it is essential that AHSCs have clarification of their roles, develop a distinct governance structure and be provided a distinct budget for a set of deliverables within an agreed-upon accountability framework.

The paper by Lozon and Fox in this issue outlines the opportunities and challenges for

AHSCs as we move forward. This commentary expands on some of these issues from the perspective of the university. At present, both partners at times feel that the other organization makes decisions that have important implications, but without proper consultation or reflection on impact. This is no greater a problem for the healthcare system than for the university and underlines the urgent need for a new definition of this strategic partnership we refer to as the AHSC. Canadian AHSCs have been impacted negatively during the past decade, and particularly so in those provinces that developed regional governance models. To assure that this does not continue to happen, AHSCs must be redefined to be both more responsive to societal needs and more recognizable by their stakeholders, not the least of which are the public and governments.

The lead paper by Lozon and Fox provides a comprehensive overview of the Academic Health Sciences Centre, its origins, complexity, resilience, costs, value to society and challenges. Although I agree with most of Lozon and Fox's perspectives, in this commentary I will offer an additional viewpoint on a number of issues: the definition and role of the AHSC, relationships within (rather than with) the university, the impact of regionalization on the AHSC, and some thoughts on the future. These comments are primarily from the perspective of the university, although some reference to the healthcare delivery system and the need for fundamental change is also provided

2002.7 Tepper JD. The Disconnect of Twin Pillars: The Growing Rift in Educational Goals and Methods between Medical Schools and the Academic Teaching Hospitals. HealthcarePapers, 2(3) 2002: 96-104

Academic teaching hospitals (ATH) and medical schools are the two main components of the Academic Health Sciences Centre (AHSC) organization. They have traditionally worked in a symbiotic, if relatively unstructured and somewhat fluid, relationship. Now changes in the medical school approach are creating stress on this traditional partnership.

First, medical schools are being driven by external pressures to better respond to societal needs. Medical schools are increasingly decentralizing their educational process to help produce physicians with the values and skills needed to meet the diverse needs of Canadian society. Second, internally, the changing nature of medical knowledge and skill sets has led to differences in the educational process with more formal standards and educational goals. Within this second change is a difference in the trainees moving through the educational system - today's future doctors represent a different value set and demographic profile than their predecessors.

These changes pose both a challenge and an opportunity for ATHs. ATHs are well positioned to be leaders and facilitators of these changes. Doing so would help strengthen the system, and would ultimately help ATHs fulfil their complex and often competing mandates. Unfortunately, there are also incentives for ATHs to fight these trends. The response of ATHs to their evolving relationship with medical schools and universities will have a large influence on the future shape and function of the AHSC.

2002.8 Ludmerer, KM. The Embattled Academic Health Centre Healthcare Papers 2002;2:59-65

Lozon and Fox have provided a thoughtful analysis of Canadian academic health centres. However, their account is incomplete. Their emphasis on the “shared purposes and goals” of the component groups of academic health centres overlooks the profound tensions and disagreements that have always existed between medical schools and teaching hospitals. In addition, their claim that academic health centres “have endured in more or less the same form throughout their history” ignores the profound growth, changing organization and evolving missions that have characterized these institutions for over a century. Lastly, they do not address the most profound dilemma of all of the academic health centres: that current financial pressures are causing an erosion of their educational work. These three aspects of academic health centres are discussed in this commentary.

2002.9 Culbertson R, A U.S. Perspective on AHSCs: A Future of Increased Diversification. HealthcarePapers 2002;2:66-72

Academic Health Sciences Centres (AHSCs) have long been viewed much as the historic battleship - possessing great force, power and bulk, but increasingly vulnerable to forays of lighter and more agile competitors. This commentary reviews the efforts of leaders of AHSCs in the United States to reposition their institutions at the centre of integrated delivery systems, partly as a result of greatly increased reliance on clinical revenue to support the historic teaching mission. While Lozon and Fox point to increased involvement of AHSCs in broad regional systems of care financed through a coordinated strategy, integrated systems in the United States may be fragmenting as marketplace-driven financial schemes actually discourage integrated care. From the perspective of organizational theory, the future seems to imply a diversification of organizational forms for the AHSCs in the United States, with a corresponding strategy of lessening reliance on clinical revenues through enhancement of research funding.

2002.10 Schneller ES. AHSCs: The Movement from Brokers of Scarce Resources to Victims of the Changing Environment of Healthcare Delivery. HealthcarePapers 2002;2:73-79

Academic health sciences centres in both the United States and Canada, once major “brokers” of medical and biomedical knowledge and other scarce resources, are frequently depicted as “victims” of the environments in which they exist. While the national and local environments in which these organizations exist differ substantially, the integrity of AHSCs in both nations is threatened by a variety of emergent and continuing externalities. It is important that AHSCs develop a sufficient vision and market to be self-determining and successful in countering pressures that challenge their teaching, research and service activities. Leadership in both Canada and the United States must become much more skilled in strategic management to achieve this goal.

2002.11 Shugart I. AHSCs: An Indispensable Partner for Governments. HealthcarePapers 2002;2:80-84

A closer relationship between Academic Health Sciences Centres and governments will benefit the overall agenda of health system reform, contribute to the focus and immediacy

of the future vision of AHSCs and give governments a deep pool of expertise from which to draw in facing significant policy challenges. Jointly established priorities in health between federal, provincial and territorial governments correspond closely to the interests and expertise of AHSCs. A mutual commitment to evidence as the basis for making decisions in health policy, in education, and in patient care, will find expression in closer interaction between these two institutions.

2002.12 Ward TF. Governments, Policy Directions and the Future of Academic Health Sciences Centres. HealthcarePapers 2002;2:85-89

Governments and the policy-making bureaucracy are faced with all of the challenges currently facing academic health sciences centres (AHSC). Traditionally, AHSCs and their faculty partners were key players in the development of policies that defined the directions of the healthcare system. A better understanding of the determinants of health, demands for new community services and an inflexible workforce are forcing governments and policy-makers to re-evaluate the role and responsiveness of AHSCs as directions are set for the system of the future. AHSCs must engage policy-makers if they expect to continue as a major influence in the direction of a Canadian publicly funded health system.

2002.13 Woollard R. AHSCs: The Complex Simplicity of Service. HealthcarePapers 2002;2:90-93

The literate and effective dissection of the problems of the modern Academic Health Sciences Centre (AHSC) represents a significant contribution by Lozon and Fox. However, the fundamental issues may be both simpler and more intractable than they describe. The hospitals, medical schools and research institutes that compose the AHSC have individually and collectively drifted away from an ethos of service with the patient at its centre. Systems theory teaches us that “emergent behaviour” wherein the AHSC becomes more than the sum of its parts will only be achieved when there is commitment to a common purpose aided by mutual respect and the generalist perspective necessary for its full expression.

As social and health trends underscore and support the need for aggregative and problem focused education and research, it is not clear that AHSCs are reacting in an effective way - increased isolation from community and generalist care leaves highly specialized institutions vulnerable to criticism of both irrelevance and sub-optimal care. A re-affirmation of unambiguous commitment to both study (research and educate) as well as serve those who suffer provides the most likely avenue to make the 21st century “the best of times” for the AHSC.

2002.14 Fyffe DW, Srigley JR. Solutions Must Include the Community Hospitals. HealthcarePapers 2002;2:105-109

The authors of this commentary acknowledge that Academic Health Sciences Centres (AHSCs) will need to change, but they assert that the need for change and urgency are even more dramatic than presented by Lozon and Fox.

While the AHSCs are likely to survive, their form and fabric are likely to change dramatically in the new order. Any solutions to the problems of the AHSCs have to include the community hospital stakeholders, especially the evolving regional teaching hospitals. This applies

not only to patient care but also to the potential teaching and research (clinical trials) contributions of the community/regional players. There must also be more involvement by non-medical faculties in defining the vision, mission and values of the AHSC.

Federal funding should be available not only to enhance the research activity of the AHSCs and the regional partners but also to provide the informatic linkages between players. Alternative funding programs for academic physicians along with enhanced productivity measures in areas of patient care, education and research are important in order to level the playing field not only with respect to remuneration but also with respect to other incentives such as recognition and promotion.

2002.15 JC, Fox RM. The authors respond. HealthcarePapers 2002;2:111-114

Full Paper:

Putting one's work out for comment and critique is a humbling and unnerving experience. After spending hours over a paper, to have others tear it apart is a daunting prospect. We thank the reviewers for their positive and helpful comments as their criticism is muted and far outweighed by constructive positions and observations that we wish we had made.

But our elation at avoiding biting criticisms raises a whole new set of doubts. Was the paper so bland that no one could find fault? Did we miss the point entirely and so were brushed over as lost causes? Or was the subject so broad that specificity in both proposal and response was impossible? We know it was not due to lack of expertise of the respondents. They are excellent contributors, and we thank them for their insights. Given that we have the last word on the matter, however, we intend to use it to propose some concrete directions for consideration as AHSCs enter another phase of their evolving history.

In general, we would characterize the responses to our paper as fitting under the general rubric of "Where you stand depends on where you sit" (of course, that is also true of the lead authors). Ludmerer, Culbertson and Schneller amplified on the changes and dynamics around AHSCs in the United States, adding greater specificity regarding market forces. Professor Ludmerer specifically noted that the market can have appreciable negative consequences on the education role. Culbertson provided a key insight by commenting on the many varieties of organizational forms of AHSCs in the United States - a comment that we want to return to later in our response. Schneller incorrectly pointed out that AHSCs, as analyzed in our paper, were exhibiting patterns of learned helplessness. We do not think that is the case, but perhaps the fault lies with our description of new opportunities. If so, we will correct that in this response.

Three of the respondents - Tepper, MacLellan and Fyffe/Srigley - have pointed out that in order for AHSCs to evolve and remain relevant they should spend more time training students for settings where the majority of care is provided as opposed to sub-specialties whose role will be narrow in the future. They point out the vital need to extend the boundaries of the AHSC to community-based settings or, as noted, regional teaching hospitals. We agree with these views, but they ignore a couple of crucial elements. If that is to occur, who will take the first move? Is it the AHSC? If so, the risk exists that the new setting will see this as another power grab. If not, then how do community-based settings and regional teaching hospitals find their way onto the agenda of busy academic leaders? Moreover, one

thing is certain. To court a real and lasting relationship with the AHSC will lead to changes in both parties. There is no free lunch, but such an endeavour will lead to lasting changes in community-based service and regional teaching hospitals.

Both Ward and Shugart provide valuable commentary from their positions as senior government officials. Ward has observed that, given the broad scope of government healthcare, it is imperative that AHSCs establish better dialogue with their funders and that the need is acute. We agree and will return to that suggestion in our directions, but would also observe that government is ill structured to deal with the totality of the AHSC and its multiple government funding sources. Ward does acknowledge the need to strike new relationships between AHSCs and their academic partners, to which we concur (with some additional thoughts). Shugart cites both the need for and the willingness of government to build closer ties with AHSCs and vice versa. We also agree and see some ways to do this.

Commentaries from Smith, Bernstein and Woollard have taken the high road in their observations. Bernstein speaks to the immense potential for AHSCs in an age of science with renewed research funding. Woollard comments on the seeming contradiction within AHSCs in that they play a pivotal role in our society but have no clear, new or exciting directions and are laboring still under overly complex structures and goals. Smith elaborates on the impact of regionalization and calls for AHSCs to redefine themselves to better serve the community. We agree with the first observation and will try to nudge along the latter two.

It is obvious that AHSCs must examine their direction in light of the complicated and often contradictory environment of Canada's healthcare system. Our lead paper provides some recommendations for changes that seem to have been widely accepted by those who have commented on them in this issue.

*"The time to repair the roof is when the sun is shining."
- John F. Kennedy*

More detailed recommendations may add value and depth to this discussion and perhaps create a greater and more urgent emphasis on the requirement for change. The goal of this response is to introduce a discussion of opportunities for the AHSC into all health policy and planning discussions, inquiries, commissions and reports. It is for this reason that we feel obliged to add the following points to invoke change. Consideration should be given to the following areas.

1. The Relationship between the university and the AHSC

There should be a renewed definition of the relationship between the university and the AHSC. This new relationship will need to vary, given current starting places, but could well establish the AHSC with more independence from the central university. Doing so will create a new governance structure for the AHSC and its constituent parts. This direction could well lead to a more pluralistic type of relationship with AHSCs and their counterparts across the country, but experimentation in this regard is good.

2. The Ministry of Health and the Ministry of Education

A harmonious relationship between the Ministry responsible for Health and the Ministry responsible for Training, Colleges and Universities is essential to support the clinical service, education and research requirements of the AHSC. Accordingly, each province should establish a new commission charged to be the point of connection between the funding agencies and the AHSCs. Like any other government department, this permanent commission would receive funding to provide the necessary support for AHSCs.

3. Extended AHSCs

New government bodies should direct AHSCs and other affected parties to embark on a course to integrate more novel and current teaching environments into the AHSC. Whether these new sites are regional teaching hospitals or community-based settings, they should be invited/required to be part of a newly designed AHSC on terms that recognize the essential need to strengthen patient care, teaching and research. Some of these changes are already underway across Canada as medical schools extend into new communities.

4. Accountability

AHSCs and their relevant government authorities should work to clarify and simplify funding streams and outputs. AHSCs cannot be seen as being unaccountable or responsible without a clear and mutual understanding of what should be produced and what type of resources are required to achieve that level of output. A key element of this process is the establishment of Alternative Funding Plans for all AHSCs and their clinical faculty.

5. Federal Role

AHSCs and their respective national associations together with the federal government should develop direct, ongoing productive relationships given the large role played by these agencies in matters of national import. The relationship would focus on the need for advancement of the innovation agenda, human resource planning and effective capital and technology renewal. As centres of care, education and research, it is logical that AHSCs could serve to pioneer new national/provincial/regional initiatives.

In proposing the changes highlighted here, it is logical to ask who should make the first move. We believe strongly that the push and the emphasis should come from the leadership of an AHSC, but it will take a partnership of all players and the sponsorship of government. The stakes are too high to allow the current situation to continue in the absence of fundamental change. The road ahead is not smooth, but we believe that we can significantly advance the social intersection of AHSCs with renewed frameworks. As Andre Gide wrote, “No progress of humanity is possible unless it shakes off the yoke of authority and tradition.” AHSCs need to change these yokes to advance to the next level.

2002.16 Paller MS, Hostetler L, Dykhuis DA. Clinical trials at AHCs: The perspective of an academic clinical trials office. Acad Med 2002;77:1201-1206

Industry-sponsored clinical trials represent a substantial portion of the clinical investigator's portfolio of patient-oriented research. In academia's efforts to reclaim lost ground with respect to the performance of industry-sponsored clinical trials, many academic health centers have established clinical trials offices. An underlying assumption has been that with improved service on the part of universities will come new opportunities for clinical research. The experiences and vantage points of academic research offices have sometimes been ignored and an analysis of what new business might ensue has not been reported. The authors discuss the rationale for creating a centralized clinical trials office and the means of financing such an effort. They then describe the initial experiences (1997-2000) of a central clinical trials office (the Research Services Organization, or RSO) at the University of Minnesota Academic Health Center, analyze the value of such an office to the academic health center, and, based on their experiences with the RSO and elsewhere, consider how industry and academia might further enhance their collaborations. Of 354 clinical research proposals evaluated by the RSO, only 62% were found to be acceptable or highly likely to be acceptable to investigators and the institution. Reasons for not participating in specific clinical trials are discussed. Academic health centers contemplating developing clinical trials offices must be aware of the significant overhead cost associated with evaluating the appropriateness and feasibility of clinical trial proposals that may never be performed. Valuable lessons learned from working with sponsors and from working with investigators are also reviewed.

2002.17 Walsh AM, Szabat K, Grass LB. Sustaining the edge: Factors influencing strategy selection in academic health centers. Jr Healthcare Manag 2002;47:360-376

Competition within the acute care sector as well as increased penetration by managed care organizations has influenced the structure and role of academic health centers during the past decade. The market factors confronting academic health centers are not dissimilar from conditions that confront other organizations competing in mature industries characterized by declining profitability and intense rivalry for market share. When confronted with intense competition or adverse external events, organizations in other industries have responded to potential threats by forming alliances, developing joint ventures, or merging with another firm to maintain their competitive advantage. Although mergers and acquisitions dominated the strategic landscape in the healthcare industry during the past decade, recent evidence suggests that other types of strategic ventures may offer similar economic and contracting benefits to member organizations. Academic health centers have traditionally been involved in network relationships with multiple partners via their shared technology, collaborative research, and joint educational endeavors. These quasi-organizational relationships appear to have provided a framework for strategic decisions and allowed executives of academic health centers to select strategies that were competitive yet closely aligned with their organizational mission. The analysis of factors that influenced strategy selection by executives of academic health centers suggests a deliberate and methodical approach to achieving market share objectives, expanding managed care contracts, and developing physician networks.

2002.18 Bickel J, Wara D, Atkinson BF, Cohen LS et al. Increasing Women's Leadership in academic medicine: Report of the AAMC Project Implementation Committee. Acad Med 2002;77:1043-1061

The AAMC's Increasing Women's Leadership Project Implementation Committee examined four years of data on the advancement of women in academic medicine. With women comprising only 14% of tenured faculty and 12% of full professors, the committee concludes that the progress achieved is inadequate. Because academic medicine needs all the leaders it can develop to address accelerating institutional and societal needs, the waste of most women's potential is of growing importance. Only institutions able to recruit and retain women will be likely to maintain the best housestaff and faculty. The long-term success of academic health centers is thus inextricably linked to the development of women leaders. The committee therefore recommends that medical schools, teaching hospitals, and academic societies (1) emphasize faculty diversity in departmental reviews, evaluating department chairs on their development of women faculty; (2) target women's professional development needs within the context of helping all faculty maximize their faculty appointments, including helping men become more effective mentors of women; (3) assess which institutional practices tend to favor men's over women's professional development, such as defining "academic success" as largely an independent act and rewarding unrestricted availability to work (i.e., neglect of personal life); (4) enhance the effectiveness of search committees to attract women candidates, including assessment of group process and of how candidates' qualifications are defined and evaluated; and (5) financially support institutional Women in Medicine programs and the AAMC Women Liaison Officer and regularly monitor the representation of women at senior ranks.

2002.19 Calleson DC, Seifer SD, Maurana C. Forces affecting community involvement of AHCs: Perspectives of institutional and faculty leaders. Acad Med 2002;77:72-81

Purpose: To understand the external and internal factors that either facilitated or were barriers to an academic health center's (AHC's) involvement in community-based education, research, and clinical care; community service; and community or economic development activities.

Method: Eight AHCs in the United States were selected by objective criteria for their significant community involvement. Chief executive officers, vice chancellors, deans, and the individuals responsible for community-based education, research, and community service responded to written surveys. Responses were subjected to quantitative and qualitative analyses.

Results: The overall response rate was 79% (n = 91). Public perception, an increased focus on a population health perspective, and an increased call for AHCs to be accountable to local and statewide constituents were cited as the most significant external factors contributing to an AHC's community involvement. Institutional leadership, familiarity with community-based organizations, institutional climate, faculty and student interest, and institutional structures were cited as the most significant internal facilitators of community involvement. Fiscal concerns, competition for community-based training sites, lack of collaboration across health professions schools, and inadequate faculty roles and rewards

were viewed as the most significant barriers to community involvement. All respondents reported that their AHCs' orientations towards community service, and community-based teaching, research, and clinical care would increase in the next five years.

Conclusion: Development of a strategic plan may increase the effectiveness of an institution's community involvement. Central to this plan should be a restructuring of faculty roles and reward policies and an increase in faculty release time to promote community involvement. The importance of involving the community in the planning and implementation of community-campus partnerships should not be underestimated.

2002.20 Chervenak FA, McCullough LB. Ethical management guidelines for leaders of academic medical centers. Acad Med 2002;77:45-47

Academic health centers (AHCs) exist for the sake of pursuit of excellence in their missions of patient care, teaching, and research. Survival should be a means to these goals and not an end unto itself. Because of the fiscal crisis in health care, leaders of AHCs face the possible diminution or even extinction of their centers. When preventing such a fate becomes the governing concern of these leaders, power concentrates in their hands and can be used to force cooperation among competing faculty members and groups for the sake of mutual survival. The ethical concepts of professionalism and justice can be used to create a vital, practical, alternative vision for the leadership of AHCs, in which their missions once again become central to their organizational culture. Creating a morally sustainable organizational culture of professionalism and justice should rely not on forced cooperation, but on voluntary cooperation of all stakeholders in the pursuit of a common goal-professional excellence in patient care, teaching, and research-with survival understood to be a means to this goal. To achieve this alternative vision, the authors propose five management guidelines. For example, all faculty should be made accountable not only for maximizing the good of the organization's professionalism but also for fostering financial viability.

2002.21 Andrae MC, Freed GL. Using a productivity-based physician compensation program at an academic health center: A case study. Acad Med. 2002;77:894-899

Purpose: With increased budget constraints, academic health centers (AHCs) have turned their focus on physician compensation. While many AHCs are concerned that compensation programs driven primarily by revenue generation will have a negative impact on their academic mission, little information is available to support this. The authors examined the effects on teaching and clinical productivity of an innovative compensation program for pediatrics primary care faculty at an AHC and related those effects to national standards for productivity.

Method: A baseline productivity and compensation assessment was conducted for a group of 35 academic general pediatricians. The data were compared with Medical Group Management Association (MGMA) figures for general pediatricians. A productivity-based faculty compensation program using the work component of the relative-value unit (RVU) as the measure of productivity was designed and implemented. Productivity and compensation were measured after the first year of the program and compared with the baseline assessment. The numbers of hours precepting students and residents and the

students' evaluations of their clinical experiences before and after implementation of the program were compared.

Results: The baseline assessment showed that over half of the faculty had productivity that fell below the MGMA 25th percentile, while the majority had compensation that exceeded this percentile. After implementation of the compensation program, 89% of the faculty increased their clinical productivity. The times faculty spent precepting and students' evaluations before and after program implementation were unchanged.

Conclusions: Successful productivity-based physician compensation programs can be developed for AHCs.

2002.22 Rodgers DV. Some thoughts on culture, family medicine, and academic health centers. Fam Med 2002;34:237-239

2002.23 Romanow, RJ. Building on Values: The future of health care in Canada. November 2002 Commission on the Future of Health Care in Canada ISBN 0-660-18939-9

The report contains 47 recommendations as applicable to the following chapters:

1. Sustaining Medicare
2. Health Care, Citizenship and Federalism
3. Information, Evidence and Ideas
4. Investing in Health Care Providers
5. Primary Care and Prevention
6. Improving Access, Ensuring Quality
7. Rural and Remote Communities
8. Home Care: The Next Essential Service
9. Prescription Drugs
10. New Approaches to Aboriginal Health
11. Health Care and Globalization

2002.24 Kirby MJ, LeBreton M et al. The health of Canadians-the Federal Role. Oct 2002. www.parl.gc.ca/37/2/parlbus/commbus/senate/Com-e/soci-e/rep-e/repoct02vol6-e.htm - 188k

Teaching hospitals in Canada form part of what is known as Academic Health Sciences Centres (AHSCs). AHSCs consist of a teaching hospital, a university faculty of medicine, and other health-related research and health care institutes (see Appendix 2.1 for a list of the 16 AHSCs in Canada and their affiliated hospitals). Because these centres are responsible for not only patient care but also teaching and research, they are much more complex than community hospitals. They also offer the newest and most highly sophisticated services and

treat the most difficult, complex cases. Hospitals with teaching/research activity have higher costs per weighted case than community hospitals. This is due to the required teaching infrastructure, specialized programs, higher utilization of diagnostic testing, and the use of resources needed for more innovative and aggressive treatment procedures. Because of the educational and research aspects of AHSCs, funding comes traditionally from at least two separate provincial government departments and, within those departments, from a variety of sources. While it is almost impossible to distinguish precisely the academic mission from the health care delivery mission, government funding can be placed into three broad categories.

First, the department of education provides operating grants to universities that in turn provide budgets for health faculties, including salaries for their academic staff. Second, the department of health provides hospitals with budgets for clinical education to pay the salaries of post-graduate trainees and partial support of the incomes of clinical faculty. Third, hospitals receive operating grants from provincial health ministries to help pay for the added cost of research and training activity.

As a result of this complexity, service-based funding poses a number of problems particular to AHSCs. Patients of AHSC often require very sophisticated treatment, the cost of which may not be accurately captured in case-mix measurement systems. Similarly, it is estimated that the cost of one multi-organ transplant costs \$213,000 per patient. However, due to the complexity and the uniqueness of the treatment, rates have not been determined in Canada for the transplants. As a result, teaching hospitals in Toronto receive funding at the same rate as for single-organ transplants, which is a fraction of the true cost of the multi-organ treatment.

The AHSC experts who appeared before the Committee supported the service-based funding methodology as long as case-mix groups and weights are established for AHSCs, distinct from those developed for community hospitals. Such a funding methodology for AHSCs should take into account a variety of factors, including the complexity of procedures and treatments, the introduction of new technologies and the use of costly drugs. Experts also stressed that consideration should be given to funding the cost of teaching and research infrastructure out of a different envelope with its own set of incentives for efficient delivery.

In their recent paper “Academic Health Sciences Centres Laid Bare”, Jeffrey Lozon and Robert Fox stated that AHSCs should be considered a national resource in the health care system and that the federal government should enhance its role in the funding of AHSCs. The authors argued that “no longer can the AHSC struggle to arrange funding from a variety of providers and without the support of the federal government.”

The Committee agrees with the witnesses that Academic Health Sciences Centres are distinct from community hospitals in that they perform a wide range of complex activities ranging from delivery, to teaching and research. Accordingly, the Committee recommends that:

Service-based funding should be augmented by an additional funding method that would take into account the unique services provided by Academic Health Sciences Centres, including teaching and research.

Moreover, the Committee strongly believes that, since they play an essential role in teaching, performing research and delivering sophisticated care, AHSCs constitute a national resource in the Canadian health care system. They are a crucial part of the health care infrastructure in Canada. Thus, the federal government is particularly well positioned to sustain AHSCs across the country, through its well-recognized roles in financing post-secondary education, funding health research, supporting health care delivery, financing health care technology and planning human resources in health care.

**2002.25 Mazankowski et al. Premier’s Advisory Council on Health Releases Comprehensive Report on Health Reform.” Government of Alberta. 8 January 2002. 10 May 2007.
<http://www.gov.ab.ca/acn/200201/11771.html>>**

The Mazankowski Report identified 10 key themes regarding the Report itself and health care reform in general. These included:

- **Long-Term Reform:** The Report is not about quick fixes or reducing costs in the short term. Instead, the objective is to reform the system over a longer term. Moreover, the Report is not about broad general ideas or approaches, but attempts to provide practical ideas and solutions to address the sustainability of the Alberta health care system.
- **Equitable Health Care:** A central position of the Report and its recommendations is that Albertans should have fair and equitable access to health services. No one should be denied access to essential health services because they are unable to pay.
- **Promoting Health:** The Report posits that the best long-term strategy for sustaining the health system is to encourage people to stay healthy. If Albertans and policy-makers focus simply on treating people when they get sick, the increasing costs of new treatments and technology could bankrupt the system.
- **Rejecting Rationing:** The answer doesn’t lie in rationing health care services. People are concerned about access to health care services and rightly so. All Albertans should have access to the very best health care when they need it. And it should be available to everyone on equitable terms.
- **More than Efficiency:** There is a need to extract maximum value for every dollar spent on health care. Such measures alone, however, will not be sufficient to match increasing demands and costs in the health care system.
- **New Ways of Paying:** The burden of health care on the tax system is growing and will continue to grow with new treatments, new cures, new drugs, and growing demand. As such, there is a need to explore new ways of paying for health care.
- **Re-thinking Medicare:** It’s time to think carefully about what medical services should be covered by public health insurance. The system was never designed to cover all aspects of health services, but people have come to expect that it will – and at no cost to individuals.
- **Innovation and Competition:** There is a need to innovate. It is time to open the system

up, allow health authorities to try new ideas, encourage competition and choice, and see what works and what does not.

- **Patient-orientation:** There is a need to develop a patient-oriented system that encourages empowerment, accountability, and continuous quality improvement.
- **Made-in-Alberta Approach:** There should not be a mimicking of other health care systems, be it those of the United States, the United Kingdom, or Sweden. Albertans and policy-makers must create their own alternative – one that preserves the best of the current system while also ensuring it can be sustained into the future.

2002.26 Govt of Ontario Web Site. Alternative Funding Models for Academic Health Sciences Centres
<http://www.health.gov.on.ca/english/providers/project/ahsc/literature.html>

The AHSC AFP Project has assembled a list of journal articles, reports and web-site links (where available), related to physician AFPs and AHSCs.

Hard copies of all articles are available at the AHSC AFP Project; see more information below.

ARNOLD, Louise, PhD

Assessing Professional Behavior: Yesterday, Today, and Tomorrow.

Acad Med 2002 77(6) : 502-515

BERNSTEIN, Alan, PhD

AHSCs : More Important than Ever in the Century of Health Research.

HealthCare Papers Vol. 2 No.3 2002 : 54-58

BLAND, Carole J., PhD; WERSAL, Lisa, MA, et al

Evaluating Faculty Performance : A Systematically Designed and Assessed Approach.

Acad Med 2002 77(1) : 15-30

BOWEN, Judith L., MD; IRBY, David M., PhD

Assessing Quality and Costs of Education in the Ambulatory Setting : A Review of the Literature.

Acad Med 2002 77(7) : 621-680

CAMPBELL, S. M.; SHEAFF, R., et al

Implementing Clinical Governance in English Primary Care Groups/Trusts : Reconciling Quality Improvement and Quality Assurance.

Qual Saf Health Care 2002 11 : 9-14

CARNEY, Patricia A., PhD; PIPAS, Catherine F., MD, et al

An Analysis of Students' Clinical Experiences in an Integrated Primary Care Clerkship.

Acad Med 2002 77(7) : 681-687

CARNEY, Patricia A., PhD; SCHIFFERDECKER, Karen E., PhD, et al
A Collaborative Model for Supporting Community-based Interdisciplinary Education.

Acad Med 2002 77(7) : 610-620

CARRACCIO, Carol, MD; WOLFSTHAL, Susan D., MD, et al
Shifting Paradigms : From Flexner to Competencies.

Acad Med 2002 77(5) : 361-367

COHEN, Jon R., MD; FOX, Susan, RN, MBA :
Developing a New Faculty Practice Plan with a Model for Funds Flow between the Hospital and the Plan.

Acad Med 2003 78 (2): 119-124

COSBY, J. L.; O'CONNOR, M., et al
Clinical Faculty Payment Systems and Learning Environments at the Queen's University and University of Ottawa Medical Schools.

Queen's Health Policy Research Unit, March 1999

2001

2001.1 Campbell EG, Weissman JS, Moy E, Blumenthal D. Status of clinical research in academic health centers: Views from the research leadership. JAMA 2001;286:800-806

Context: The changing state of the health care system in the United States may be adversely affecting clinical research conducted in academic health centers (AHCs). Few formal data have been gathered about the nature and extent of the problems facing clinical research or the effects of remedies undertaken by AHCs.

Objectives: To assess the perceived quality and health of the clinical research enterprise and to determine challenges and adaptations to current environmental pressures.

Design, Setting, and Participants: Mailed survey conducted between December 1998 and March 1999 of a subsample of department chairs and senior research administrators (SRAs) in all US medical schools. Of the 712 potential respondents, 478 completed a questionnaire, yielding an overall response rate of 67.1% (64.8% for SRAs and 67.8% for department chairs).

Main Outcome Measures: Ratings of overall health/robustness of clinical research, quality of research in 5 domains, extent of challenges to performing research, and sense of urgency in responding to research challenges; formal strategies for research-related tasks and their effects.

Results: Slightly more than half (52%) of all respondents rated the health of the clinical research enterprise as good or excellent compared with 63% for nonclinical research (P<.001). Respondents were most likely to rate nonclinical research as high in quality (79%) compared with 70% for phase 3 clinical trials, 67% for translational research, 65% for phase 1 and 2 trials, and 57% for health services research (for all comparisons with

nonclinical research, $P < .001$). Pressure on clinical faculty to see patients was perceived as a moderate-to-large problem for clinical research by the largest percentage of respondents (93%), followed by insufficient clinical revenues (89%), recruiting trained researchers (75%), lack of external support for clinical research (72%), competition from contract research organizations (48%), problems introduced by the institutional review board process (38%), and finding research participants (37%). In total, 81% of respondents considered the challenges facing clinical research in AHCs to be urgent or extremely urgent.

Conclusions: Academic leaders perceive clinical research activities in AHCs to be less healthy, of poorer quality, and facing greater challenges than nonclinical research activities. Many AHCs do not have policies or mechanisms to address challenges facing the clinical research mission. Even among those with such policies, more than half do not believe these policies have had large positive effects. Our findings support the view that the clinical research workforce and infrastructure may need to be expanded and strengthened to keep pace with advances in basic research.

**2001.2 Stevens LM, Lynn C, Glass RM. Academic Health Centers
JAMA 2001;286:113**

Refer to actual editorial in JAMA

2001.3 Rodriguez JL, Peterson DJ, Muehlstedt SG, Zera RT et al. The impact of managed care and current governmental policies on an urban academic health care center. Surgery 2001;130:539-545

Background: Managed care and governmental policies have restructured hospital reimbursement. We examined reimbursement trends in trauma care to assess the impact of this market driven change on an urban academic health center.

Methods: Patients injured between January 1997 and December 1999 were analyzed for Injury Severity Score (ISS), length of hospital stay, hospital cost, payer, and reimbursement.

Results: Between 1997 and 1999, the volume of patients with an ISS less than 9 increased and length of stay decreased. In addition, overall cost, payment, and profit margin increased. Commercially insured patients accounted for this margin increase, because the margins of managed care and government insured patients experienced double-digit decreases. Patients with ISS of 9 or greater also experienced a volume increase and a reduction in length of stay; however, costs within this group increased greater than payments, thereby reducing profit margin. Whereas commercially insured patients maintained their margin, managed care and government insured patients did not (double- and triple-digit decreases).

Conclusions: Managed care and current governmental policies have a negative impact on urban academic health center reimbursement. Commercial insurers subsidize not only the uninsured but also the government insured and managed care patients as well. National awareness of this issue and policy action are paramount to urban academic health centers and may also benefit commercial insurers.

2001.4 Oinonen MJ, Crowley WF, Maskowitz J, Vlasses PH. How do academic health centers value and encourage clinical research? Acad Med 2001;76:700-706

To investigate whether there is a misalignment of the perceived values of and incentives for clinical research within U.S. academic health centers (AHCs), in 1999 the authors surveyed medical school deans, academic administrators, department chairs, and faculty members at 80 AHCs that are the members of the University HealthSystem Consortium, a not-for-profit consortium of AHCs. A total of 358 faculty from 58% of the institutions surveyed responded, with a mean of 3.76 responses/institution. There was general agreement that clinical research offers AHCs a considerable spectrum of benefits, including prestige, recruitment and retention of faculty, criteria for promotion of faculty, and financial support. Investigator-initiated research and government-funded research ranked highest in terms of their desirability compared with industry-sponsored and contract research. This preference was agreed upon across all categories of respondents and types of research (translational, clinical tests, and outcomes). Significant differences existed between the perceptions of deans/AHC administrators, who stated that they were increasing their emphasis on clinical investigation in the areas of research space (56% of responders), administrative support (81%), and patient recruitment (61%) and the perceptions of their departmental chairs/faculties in the same areas (34%, 52%, and 40%, respectively; $p < .05$). Faculty opinions documented few new investments in the actual infrastructure dedicated to clinical research. The authors conclude that their findings, which they consider reasonably representative, strongly suggest that the value of clinical research to AHCs is well understood. Their findings also identify important opportunities for AHCs to provide a wider range of incentives for the conduct of clinical research.

2001.5 Crowley WF, Thier SO. A program to facilitate clinical research in an AHC: The first five years. Acad Med 2001;76:403-409

The authors describe the first five years, 1996-2000, of the Clinical Research Program (CRP) at the Massachusetts General Hospital (MGH). The CRP was established to improve the quality and increase the quantity of clinical research within the MGH, and has concentrated on three areas: translational research, clinical trials, and out-comes research/epidemiology. The authors describe the CRP's efforts and strategies in these areas in detail, and explain the nature of the workforce, training, resources, and other factors that the CRP has brought to bear in fostering the goals in each area. The CRP's organization is also described, focusing on its administrative core and five units (e.g., the Education Unit), each of which has a distinct function in fostering clinical research. The success of the CRP's work can be measured in several ways, including greatly increased revenues from clinical trials and a large jump in the numbers of registrants for CRP courses. The authors state that CRP-type programs are essential for academic health centers (AHCs) that wish to maintain a balanced portfolio in clinical investigation in the future. They believe that AHCs that can afford to should invest in fostering their unique ability to train clinical investigators and generate new therapies for the future.

2001.6 Garson A, Levin SA. Ten 10-year trends for the future of healthcare: Implications for Academic Health Centers. Ochsner Journal 2001;3:10-15

The threat to the United States' Academic Health Centers (AHCs) has been reported for the past decade, signified most importantly by the decrease in the perceived value of patient care delivered and a significant reduction in direct payments to physicians in AHCs. These reductions have required AHCs to become more efficient and increased pressures to become more productive in both patient care and research. The U.S. healthcare system continues to evolve in response to these challenges and the additional pressures of increasing costs and the increasing numbers of uninsured. Ten trends for the next decade are evident: 1) more patients, 2) more technology, 3) more information, 4) the patient as the ultimate consumer, 5) development of a different delivery model, 6) innovation driven by competition, 7) increasing costs, 8) increasing numbers of uninsured, 9) less pay for providers, and 10) the continued need for a new healthcare system. In response to these trends, AHCs will have to continue to improve efficiency by increasing cooperation between researchers, clinicians, and educators while demonstrating how they are "different" and "better" than the competition. The AHC has the tools and the personnel not only to improve patient care processes but also to understand how to decrease costs while maintaining quality. AHCs also have the size and expertise to establish control over geographic market share with services not available elsewhere. Such programs must be able to evolve and respond to market pressures, and the AHC must be an engine of innovation, continuously regenerating new knowledge and programs with "Centers of Excellence" and appropriate industry partnerships. Such progress is driven by better communications and greater sharing of information and collaboration at all levels, including building better physicians referral networks. These accomplishments, driven by technology, will allow AHCs to improve quality of care and increase efficiency even under the increasing burden of patients and uninsured. This will position AHCs as the most important advocates and lead players in the development of an improved national healthcare system.

2001.7 Mulder DS. Current health care crisis: A Canadian perspective. Archives of Surgery. 136:169-171

Full Text:

To comprehend the current loss of favor with Canada's most revered social program, it is useful to review its development and recent changes in funding and application. Canada's health care program has evolved over a span of more than 50 years. The current comprehensive national health insurance program began in the post-World War II era with a "land tax" program to subsidize hospital construction in rural Saskatchewan. This led to a general health grant program in 1948 primarily for hospital construction. A Canada-wide hospital insurance act followed in 1958, which provided coverage for hospital care and any diagnostic procedures conducted in a hospital. Several provinces in the early 1960s moved to a medical insurance plan for coverage of all physicians' fees. In 1965, special federal funds were segregated for the development of new and expansion of existing academic health centers with the goal of making Canada self-sufficient in terms of producing all health care professionals. By 1969 to 1970, all Canadian provinces had put in place a comprehensive, publicly financed health care system. This system was based on 5 basic fundamentals, which included.

Public administration of a provincial health insurance plan on a nonprofit basis with public accountability.

- Comprehensiveness with coverage of all medically necessary services provided by physicians and all in-hospital care.
- Universality. Every citizen in each province be entitled to health insurance coverage.
- Portability. Provision of medical insurance coverage when a resident moves or travels in any part of Canada.
- Accessibility. Reasonable access to any medically necessary hospital or physician services unimpeded by financial or other barriers. The system would allow every patient to see their physician of choice. Physicians are remunerated on a negotiated fee for service basis.

The Canada Health Act of 1984 was the next step in terms of refining the system. This act prevented extra billing for any health care services and reaffirmed the original 5 basic principles. Recently, Robert McMurtry, MD, FRCS, former Dean at the University of Western Ontario, has suggested that a sixth and perhaps seventh principle be established: accountability and transparency.¹ The 1984 Canada Health Act basically precluded any form of private health insurance for hospital or physician services in all provinces. It prevented commercial insurance coverage for any publicly insured service.

While health has always been a provincial prerogative, the financing of this plan has always been on a federal-provincial cost-sharing basis. The mechanism and the amount of federal support has varied over the past 25 years, but it is generally based on federal transfer payments to each province, provided the 5 principles are fulfilled. At the outset, the federal government contribution was a 50-50 cost-sharing arrangement. This was first modified in 1977 when the current concern over rapidly escalating health care costs resulted in a new transfer formula that resulted in the federal government providing 44.6% in federal transfer funds. By 1990, the national government provided only 36.7% in transfer payments. With budget reductions, the 1997 percentage fell to approximately 23%, and the mechanism of transfer was changed to the Canadian Health and Social Transfer, which covered funding of health, education, and social services, and allowed provinces to determine priorities in each area of expenditure. This resulted in a dramatic cost shifting to provincial budgets. There remained, however, a remarkable degree of uniformity within each of the 10 provinces.

A breakdown of health care spending in Canada reveals hospital care to be the largest item. Data from 1997 reveal hospital expenditures to be 32% of total spending, down from 46% in the early 1970s. This is mirrored by a 33% decline in the number of hospital admissions. Physicians' remuneration has declined from 16% in 1987 to a predicted 14% in 1999. The most rapidly rising expenditure has been on prescription drugs, representing 8.4% of the total in the 1970s and projected to reach 15.2% by 1999.² Approximately 70% of prescription drugs are covered by specialized forms of private insurance. Variable provincial pharmacy plans provide support for drug costs to the poor and elderly populations.

The balance between public and private spending has fluctuated recently. Public (government) spending on health care was initially as high as 80%. This percentage had

decreased to 75% in 1990 and to 69% in 1997. Private health care spending relates to dental services, outpatient prescription drugs, rehabilitation services, and private duty or home care nursing. Recently, there has been a dramatic increase in the number of privately operated high technology imaging services, such as computed tomographic scanning and magnetic resonance imaging. This has again raised the question of a “2-tier” health care system as a mechanism to increase private funding of medical care.

The satisfaction of Canadians with their health care program was well above 90% in terms of popularity throughout the 1970s and 1980s. The health care program was sacrosanct and almost as Canadian as ice hockey.³ Hugh Segal, who is currently president of the Institute for Research and Public Policy, has stated, “It would be safer to propose an amendment to the 10 commandments than to the Canada Health Act.”⁴ In the early 1990s, however, concerns began to be expressed by the public in terms of dissatisfaction with Canada’s health care system. This concern came from patients, physicians, editorialists, and some politicians. Coincident with the federal government’s reduction in transfer payments for the health care program, there was a dramatic reduction in the ability of physicians and hospitals to provide the previous high level of services. A public opinion poll in the late 1990s revealed that fewer than 20% of Canadians were satisfied with their health care system.³ The reduction in hospital capacity, a result of mergers and closures of hospitals, led to a crisis in terms of access to hospital beds, which was reflected in the dramatic overcrowding of emergency departments and greatly elongated waiting lists for patients requiring diagnostic and therapeutic services as well as elective operative procedures. The delay in access for imaging, elective surgery, and radiotherapy has produced a varying degree of “cross-border” transfers to the United States. This has been particularly prominent in Quebec, Ontario, and British Columbia for urgent radiotherapy. Many patients also jump the queue for elective surgical procedures by making private arrangements in adjacent US centers. Concurrent with the reduction in acute-care hospital beds was an across the board reduction in physician manpower. This commenced in 1992 with a 10% reduction in medical school enrollment after the recommendations of a government-funded study for provincial ministers of health.⁵ A 10% reduction in funded residency positions was carried out concurrently. This reduced the production of all types of medical specialists in Canada.⁶ At the same time, there were dramatic changes taking place in the Canadian nursing profession. Many hospitals reduced the number of full-time nursing positions and converted them to part-time or on-call positions, primarily for financial reasons. From 1993 to the current year, the number of admissions to nursing school has dropped from greater than 12 000 to 5000.⁷ This reduction has been a major factor in reduced operating room capacity because of a shortage of skilled nurses.

High technology diagnostic and therapeutic equipment was also controlled by provincial government global budgets. Items such as magnetic resonance imaging machines and computer tomographic scanners were all severely curtailed. Canada currently ranks in the lower third of the member nations of the Organization for Economic Cooperation and Development, Paris, France, in terms of having high technology equipment available for patient care.⁸ The overall impact of the sharply reduced financial support of the Canadian health care system has to produce a high state of concern among users and providers. It has had a more pronounced effect on academic health centers in terms of the reduction in the number of acute-care beds available for teaching and for support of clinical faculty.

The move to a greater level of ambulatory care has necessitated changes in practice and in the education of future surgeons and physicians. While emergencies and urgent medical problems are dealt with reasonably effectively in Canada, there is a growing concern about the lengthy waits for diagnostic services, such as magnetic resonance imaging, and for elective surgery. The current waiting list for a total joint replacement in the McGill environment is more than 18 months.

The high level of dissatisfaction from all portions of the Canadian population has led to vigorous public debates in newspapers,⁹⁻¹³ at university departments, and was the lead item in the recent national election. There has been a growing public voice concerned with the “sustainability of our national health care system.” Politicians, editorialists, physicians, and nurses have also raised concerns as to whether the current system can survive.¹⁰ In all of the public debate, there seems to be strong continued support for the 5 basic principles enshrined in the Canada Health Act. The medical profession in the form of the Canadian Medical Association and the Royal College of Physicians and Surgeons representing specialty medicine in Canada have convened a medical forum, which has already made strong recommendations in terms of augmenting the medical school class size and the funded residency positions to expand the current production of specialists and to allow for reentry of primary care physicians to specialty training. Hugh Scully, MD, who is a cardiac surgeon in Toronto and has just completed a term as president of the Canadian Medical Association, has made an urgent plea for all Canadians to work together in developing a “high quality health care system that is accessible to all Canadians when and where needed that allows physicians to practice to the best of their abilities, and that is supported by adequate stable funding....”¹⁴

A recent federal response to the high level of discontent regarding health care has been a restoration of transfer funds to the provinces in the range of 21.2 billion dollars.¹⁴ In addition, a further 2.3 billion dollars of targeted federal funding is for federal/provincial shared priorities. The entire mechanism of funding health care research in Canada has been revised, replacing the Medical Research Council with a new umbrella organization and greatly augmenting support for basic and clinical medical research in Canada.

Duncan Sinclair, MD, who was a former Dean of Medicine at Queen’s University and recently chaired the Health Services Restructuring Committee in Ontario, was the lead author in a stimulating document titled *Rethinking Medicare: It’s Time to Do It*.¹⁵ This is only one attempt to suggest solutions to the current health care dilemma. The contributors included epidemiologists, nurses, health care planners, patients, businessmen, academics, and other health care planners. Sinclair quickly reached a conclusion that while the system is clearly underfunded, adding cash to the system alone without substantive basic changes will be ineffective. The business community has proposed that a public-private partnership or that greater private financial input is workable and should be part of the solution. This suggestion varies from user fees, a limitation on insured services (Oregon style), and the establishment of private clinics (ophthalmology, day surgery, etc) to decompress the public system. The epidemiologists point to the rapidly growing demand from an aging population and the meteoric technology developments, such as gene manipulation, need to be factored into the solution. Their emphasis is on prevention over acute care. All of the contributors agree that accountability of the system will depend on the capacity to

collect, analyze, and act on health information to prioritize the current spending of 90 billion dollars annually. Sinclair concludes similarly to Dr Hugh Scully of the Canadian Medical Association that Canada's health care system must change but will be dependent on the political will to make change and the scope and nature of change demanded. He concludes with the statement, "The greatest challenge of rethinking Medicare is to find ways to bridge between the domains of policy making and politics to achieve the changes necessary to meet the needs of Canadians into the 21st century."¹⁵

Thus, the ultimate solutions are not yet apparent, but there has been vigorous debate related to the global sum of public funds available and the priority of health care as a competitive social program. The extent of medical coverage provided under a publicly funded system and the balance between funding from federal or provincial governments and the private sector has also been questioned.¹⁶ Positive developments include the recent restoration of federal funding and the increase in medical student entries and funded residency slots, which will augment the current shortfall in health care professionals. There is an encouraging joint discussion by all concerned parties to provide the optimal solution to the provision of high quality, timely health care for every Canadian.

2001.8 Blumenthal D, Causino N, Campbell EG, Weissman JS. The relationship of market forces to the satisfaction of faculty at academic health centers. Am Jr Med 2001;111:333-340

2001.9 Retchin S.M., Perlin J.B., Clark R.R. Clinical service standards at academic health centers. Inter Nat Jr Quality in Health Care. 2001;13:247-256

Objective: To describe the content and variability for clinical service standards related to quality of care among a convenience sample of academic health centers.

Design: We used the membership of the University HealthSystem Consortium, an alliance of academic health centers in the United States for clinical services, to survey electronically 53 of these centers regarding clinical service standards. The survey evaluated service standards in four areas; general communications, communications between physicians, ambulatory and inpatient clinical services and administrative standards.

Results: Thirty-four institutions responded to the survey (64%). Of these, 16 (47%) had clinical service standards, while the remaining 18 (53%) had not established formal standards. A few of the centers had established standards for patient communications, such as policies for answering telephones by staff. More had developed standards for communications between physicians and most centers had established standards for appointment availability, especially for urgent visits. However, clinical service standards were less typical for inpatient consultative or diagnostic services. A small number of the academic health centers had standards for hours of operation and for handling administrative matters, such as patient complaints. For many clinical service standards at the centers, there were notable variations (e.g. non-urgent primary care visits ranged 3-14 days).

Conclusion: Some academic health centers have developed and implemented patient-centered clinical service standards for diverse areas of practice, however, the standards used appear to vary for some aspects of care, but not for others.

2001.10 Taheri PA, Butz DA, Dechert R, Greenfield LJ. How DRGs hurt academic health systems. *Jr Am College Surgeons*. 2001;193:1-11

Background: Academic health centers continue their mission of clinical care, education, and research. This mission predisposes them to accept patients regardless of their individual clinical variation and financial risk. The purpose of this study is to assess the variation in costs and the attendant financial risk associated with these patients. In addition, we propose a new reimbursement methodology for academic health center high-end DRGs that better aligns financial risks.

Study Design: We reviewed clinical and financial data from the University of Michigan data warehouse for FY1999 (n = 39,804). The diagnosis-related groups were classified by volume (group 1, low volume to group 4, high volume). The coefficient of variation for total cost per admission was then calculated for each DRG classification. A regression analysis was also performed to assess how costs in the first 3 days estimated total costs. A hybrid methodology to estimate costs was then determined and its accuracy benchmarked against actual Medicare and Blue Cross reimbursements.

Results: Low-volume DRGs (< 75 annual admissions) had the highest coefficient of variation relative to each of the three other DRG classifications (moderate to high volume, groups 2, 3, and 4). The regression analysis accurately estimated costs (within 25% of actual costs) in 64.7% of patients with a length of stay [greater-than or equal to] 4 days (n = 16,287). This regression fared well compared with actual FY 1999 DRG-based Medicare and Blue Cross reimbursements (n = 9,085 with length of stay [greater-than or equal to] 4 days), which accurately reimbursed the University of Michigan Health System in only 43.9% of cases.

Conclusions: Academic health centers receive a disproportionate number of admissions to low-volume, high-variation DRGs. This clinical variation translates into financial risk. Traditional risk management strategies are difficult to use in health care settings. The application of our proposed reimbursement methodology better distributes risk between payers and providers, and reduces adverse selection and incentive problems (“moral hazard”).

2001.11 Hauer KE, Wachter RM. Implications of the hospitalist model for medical students' education. *Acad Med*. 2001;76:324-330

At many academic health centers, medical students in internal medicine, family medicine, and pediatrics are working with a new form of attending physician, the hospitalist. Although a growing literature demonstrates the benefits of hospitalists for patients and housestaff, the influence of hospitalists on students has been underemphasized. Advantages of the hospitalist model for students can include hospitalists' expertise in general inpatient medicine, their availability to teach throughout the day, and their role-modeling of the provision of high-quality and efficient care. However, the change in the ward attending workforce from non-hospitalist generalists, sub-specialists, and biomedical researchers to generalist-hospitalists potentially limits students' exposure to the broad range of career opportunities the former group represents. The authors propose a research agenda to investigate the educational impact of the hospitalist model, suggest strategies to mitigate the limitations in students' exposures to subspecialty faculty, and recommend professional

development in teaching for hospitalists to ensure that student education thrives in this new environment of inpatient medicine.

2001.12 Moskowitz J, Thompson JN. Enhancing the clinical research pipeline: Training approaches for a new century. Acad Med 2001;76:307-315

There is growing concern that the numbers of physician-scientists being trained in U.S. academic health centers will not be sufficient to continue the rate of current progress in biomedical research. The authors believe that the needs of current trainees and junior faculty must be addressed immediately, and that programs to train the next generation of patient-oriented researchers must be established without delay. The authors describe a two-pronged approach to this looming crisis. First is a description of innovative educational programs implemented at one academic health center from the K-12 level through the medical-school curriculum. Second, programs are discussed that have been developed to facilitate the recruitment, training, and retention of physician-scientists in the early parts of their professional careers. Four models of training “translational” investigators are presented, along with case studies of how these models have been implemented in real-life productive and professionally satisfying collaborations within one academic health center. The authors conclude by stating that to be prepared for the effects of future knowledge on human disease and preventive health, academic health centers must enhance training opportunities for physician-scientists.

2001.13 Wolff M, Maurana CA. Building effective community-academic partnerships to improve health: A qualitative study of perspectives from communities. Acad Med 2001;76:166-172

Purpose: To identify, through a qualitative study, community perspectives on the critical factors that facilitate the development, effectiveness, and sustainability of community-academic partnerships.

Method: Between June 1998 and April 1999, 25 semistructured interviews were conducted with community members who represented eight partnerships at five academic health centers. Content analysis and open coding were performed on the data, and patterns of ideas and concepts were categorized.

Results: After review of the data, responses from three partnerships were excluded. Nine major themes that community respondents thought strongly influenced the effectiveness of community-academic partnerships emerged from respondents from the remaining five partnerships: (1) creation and nurturing of trust; (2) respect for a community’s knowledge; (3) community-defined and prioritized needs and goals; (4) mutual division of roles and responsibilities; (5) continuous flexibility, compromise, and feedback; (6) strengthening of community capacity; (7) joint and equitable allocation of resources; (8) sustainability and community ownership; and (9) insufficient funding periods.

Conclusion: The themes that emerged from this study of the perceptions and experiences of the community partners in community-academic partnerships can be critical to further developing and evolving these partnerships.

2001.14 Fyke KJ. Caring for Medicare: Sustaining a quality system.
www.health.gov.sk.ca/medicare-commission-final-report-2001

The mandate of the Commission on Medicare is three-fold:

- To identify key challenges facing the people of Saskatchewan in reforming and improving Medicare.
- To recommend an action plan for delivery of health services across Saskatchewan through a model that is sustainable and embodies the core values of Medicare.
- To investigate and make recommendations to ensure the long-term stewardship of a publicly funded, publicly administered Medicare system.

The first part of the Commission's mandate was addressed in an earlier report, *Caring for Medicare: The Challenges Ahead*, along with a process of public dialogue and discussion initiated by the Commission in the Fall and Winter of 2000-012.

This report makes a series of recommendations which together constitute an action plan for the delivery of health services, a plan that will, when implemented, ensure that Medicare is not just preserved, but substantially enhanced and improved. The first two chapters of this report emphasize a plan to organize and manage health services delivery. Chapter One focuses on everyday services, those parts of the health system people come into contact with first and most often. To address everyday health needs in a way that ensures quality and long-term sustainability, the Commission on Medicare recommends the development of an integrated system for the delivery of primary health services. While there are many models of primary care or primary health services that also incorporate the use of teams, the Commission recommends the creation of truly interdisciplinary Primary Health Service Networks. Networks would provide strong links between teams and bring together a range of health care providers to deliver everyday health services. The Commission recommends that the Network be integrated and organized to include community and emergency service providers. The Commission also recommends use of a telephone health advice line, so in effect, the office would never be "closed". Outside of office hours, telephone calls would be forwarded to a nearby Team member or to another part of the Primary Health Network or to a provincial call centre. A high quality and sustainable system of primary health services is only possible by carefully knitting together the existing providers - family physicians, health district staff, emergency medical personnel, and pharmacists - who often work in isolation from one another.

The Commission also recommends that health districts have the mandate to organize and manage Primary Health Teams and be responsible for contracting with or otherwise paying family physicians, primary care nurses and other health providers. The Commission further recommends the integration of many of the existing hospitals and integrated facilities in the province into Primary Health Networks. Specifically, the Commission recommends a network of Primary Health Centres as well as Community Care Centres in 25 - 30 locations to allow for overnight stays for convalescence, respite, and palliative care. Occasionally, people need more specialized services, which include a wide range of services requiring advanced equipment and skills. For example, assessment of childhood autism requires a team with pediatric and developmental expertise. Acute medical care and surgery require

physicians, nurses and other providers with special training. Diagnostic tests such as Computed Tomography (CT), ultrasound or Magnetic Resonance Imaging (MRI) require specialized equipment, skilled technicians to operate the equipment and radiologists to interpret results. However, as described in Chapter Two, the current manner in which these services are delivered in Saskatchewan is not sustainable and does not always allow physicians, nurses, technicians and other health care providers to deliver high quality services on a timely basis. This is why the Commission recommends that health districts contract for the services of specialists, further integrating physicians into the health services delivery system. The Commission also recommends the development of a province-wide plan for the location and delivery of specialized services based on standards established by a Quality Council. As described in greater detail in Chapter Two, the Commission recommends that this province-wide plan include the consolidation of tertiary services delivered in Saskatoon, Regina and Prince Albert and a network of 10 to 14 Regional Hospitals for basic acute and emergency care. A public, universally accessible health system is designed not only to treat illness when it occurs, but also to produce better health for individuals, and population groups. A fair and sustainable health system is one in which there is a balance between spending on “downstream” activities: diagnosis and treatment, as well as investments in “upstream” activities: disease prevention, health promotion and protection. As a result, the Commission recommends in Chapter Three the continuation of public health, health promotion, and disease and injury prevention strategies.

The Commission also recommends the development of regular reports on defined and measurable health goals, strategies to address the broader determinants of health, and specifically, a Northern Health Strategy to meet the unique and urgent needs of people in northern Saskatchewan. Quality can be defined as doing the best job possible with the resources available. Simply put, the health system has yet to achieve an appropriate level of quality. The delivery of health services in Saskatchewan and in Canada must be infused with a quality culture. While there are numerous health care quality initiatives underway in Saskatchewan, there is no overall framework or coordinating body, nor are there regular and comprehensive reports to either providers or the public. To begin to address these gaps, in Chapter Four of this report the Commission supports the continuing work in Saskatchewan and elsewhere in Canada on a Quality Council with a mandate to improve the quality of health services in the province. The Council should be an evidence-based organization, arm’s length from government and reporting to the Legislative Assembly. In so doing, Saskatchewan will lead the country in the pursuit of a quality culture that will be the next great revolution in health care. Much of the Commission’s report is focused on change - changes to the way in which health care is organized and delivered as well as changes leading to a sustainable, system of health services, that emphasizes quality and accountability.

To support and enable change Chapter Five of this report contains a series of recommendations dealing with governance, accountability, health human resources, education and research, and information technology. Specifically, the Commission recommends a move to 9 to 11 health districts, and a clarification of their relationship to the Government of Saskatchewan. In order to improve health services delivery to Aboriginal communities in the province, the Commission is also recommending a structured dialogue between the federal and provincial governments as well as representatives of Aboriginal

peoples on the delivery of health services. To address staff shortages, poor morale, and general frustration with the health system the Commission recommends coordinated, province-wide human resources planning and management. Other sectors, and indeed whole industries, faced with broadly similar challenges, have reacted by investing heavily in information systems. In this same spirit, the Commission recommends continuing investments in information and communication technology including the development of an Electronic Health Record.

The Commission has concluded that education and research are critical supports to the process of change required for the health system. Along with a renewed mandate for health sciences education the Commission recommends that the Government of Saskatchewan increase its investment in health research to a figure equalling one per cent of its health spending.

The fiscal challenge facing the health sector should not be underestimated. As outlined in Chapter Six, if major changes are not made quickly, the Commission projects Government expenditures on health will grow more quickly than Government revenues, leading to a gap of over \$300 million at the end of four years. To meet this fiscal challenge and ensure the longterm stewardship of Medicare, the Commission does not recommend increasing health care funding to prop up the status quo, either in the form of higher taxes or through public insurance premiums or user charges. The Commission does recommend that future investments in the health sector be directed to change: changing the organization and delivery of primary and specialized services; enhancing the overall health of the population; research to support health services education, and to develop and report on performance measures, service quality and value for money; and, finally managing change and creating a quality-oriented health services culture.

Finally, Chapter Six comments on the broader social context required to sustain the health system. For a social program like Medicare to succeed, all parties must honour the implicit terms and conditions of the social contract that underlies it. Health workers must help create incentives that reward good practice, abandon obsolete practices, and realign the division of labour. Governments must report to the public about system performance, ensure accountability for the quality of the services provided, and resist promising more than can be reasonably expected. The public must demand quality and pay attention to value for money, so that other societal needs can be met. All parties have, to varying degrees, underestimated the fragility of Medicare and have focused on their own entitlements rather than their obligations. There are no villains in the piece; it has been a collective loosening of our grip on the terms and conditions of a sustainable quality system. There are many recommendations in this report about structure, organization, quality, and standards. Success will follow only if there is a change in perspective, behaviour, and rhetoric.

2000

2000.1 Retchin SM. Three strategies used by academic health centers to expand primary care capacity. Acad Med 2000;75:15-22

The growth of managed care in the late 1980s and early 1990s severely disadvantaged academic health centers (AHCs). The reliance on primary care gatekeeping and selective

contracting by managed care plans were two contributing factors. Because most AHCs had only a modest primary care capacity, they were understandably concerned about their strategic positions. Thus, many felt it was essential to expand their primary care capacities to ensure downstream referrals, to improve contract negotiations with third parties, and to permit assumption of risk for defined populations. Among the different approaches used, three principal strategies emerged for the expansion of the primary care capacity of AHCs: (1) the 'assembly strategy,' in which many AHCs recruited new generalist faculty into existing clinical departments; (2) the 'acquisition strategy,' in which AHCs purchased established primary care practices in the community; and (3) the 'affiliation strategy,' in which some AHCs affiliated with primary care physicians in the community and formed networks of academic and community physicians. For each of these approaches, the author reviews the relative merits and disadvantages, and analyzes why some AHCs' original assumptions about the imperative for increasing primary care capacity may have been spurious. He concludes that recent marketplace and regulatory changes may make it less necessary for AHCs to secure substantial primary care bases in the future.

2000.2 Gorman PJ., Meier AH, Rawn C, Krummel TM. The future of medical education is no longer blood and guts, it is bits and bytes. Am Jr Surg 2000;180:353-356

In the United States, medical care consumes approximately \$1.2 trillion annually (14% of the gross domestic product) and involves 250,000 physicians, almost 1 million nurses, and countless other providers. While the Information Age has changed virtually every other facet of our life, the education of these healthcare professionals, both present and future, is largely mired in the 100-year-old apprenticeship model best exemplified by the phrase "see one, do one, teach one." Continuing medical education is even less advanced. While the half-life of medical information is less than 5 years, the average physician practices 30 years and the average nurse 40 years. Moreover, as medical care has become increasingly complex, medical error has become a substantial problem. The current convulsive climate in academic health centers provides an opportunity to rethink the way medical education is delivered across a continuum of professional lifetimes. If this is well executed, it will truly make medical education better, safer, and cheaper, and provide real benefits to patient care, with instantaneous access to learning modules. At the Center for Advanced Technology in Surgery at Stanford we envision this future: within the next 10 years we will select, train, credential, remediate, and recredential physicians and surgeons using simulation, virtual reality, and Web-based electronic learning. Future physicians will be able to rehearse an operation on a projectable palpable hologram derived from patient-specific data, and deliver the data set of that operation with robotic assistance the next day.

2000.3 Gwinner VM, Strauss JF, Milliken N, Donoghue GD, Newman E. Implementing a new model of integrated women's health in academic health centers: Lessons learned from the National Centers of Excellence in Women's Health. Jr. Womens Health & Gender-based Med. 2000;9:979-985

The National Centers of Excellence in Women's Health Program (CoE) represents a new model for women's health in academic health centers that unites women's health research, teaching, clinical care, public education and outreach, and career advancement for women in the health sciences. Lessons learned from the first 3 years of implementation indicate

that this type of model requires a transformation from the traditionally fragmented set of activities in academic health centers to an integrated system united around the goal of advancing women's health. The transformation requires institutional commitment, dedicated players, and an ability to build on existing resources and bring added value to the institution. Challenges and strategies to link women's health activities and increase collaboration are also discussed.

2000.4 Hueston WJ, Mainous AG, Bazell C, Connor MK. Challenges to academic family medicine in the current health care environment. Fam Med 2000;32:240-245

Background: Changes in health care delivery and funding have placed strains on academic medical centers' ability to meet their multiple missions. To gain insight into how this new academic landscape is affecting academic primary care, this study examined the current status and perceived challenges at nine departments of family medicine at allopathic and osteopathic medical schools.

Methods: Site visits were made to nine academic departments of family medicine where key informant interviews were conducted with several individuals in key leadership positions. Sites were chosen to maximize diversity among departments along a variety of factors, such as location, size, mission, and type of school (private versus public). Interviews were transcribed and analyzed by a three-person multidisciplinary team for key themes.

Results: Analysis of interviews revealed five major challenges for academic departments of family medicine: 1) adjusting to new clinical demands in the academic health center, 2) organizing and administering new initiatives in community-based education, 3) recruiting and retaining faculty, 4) developing and maintaining research capacity, and 5) serving multiple missions (education, clinical care, and academic pursuits) in times of financial restraint.

Conclusions: Significant challenges face academic departments of family medicine. The success or failure of departments of family medicine to meet these challenges could serve as a bellwether for how primary care fits into the future overall scheme of academic health centers.

2000.5 Osterweis M, Holmes DE. Global dimensions of domestic health issues. Assoc. Academic Health Centres. 2000

Global Dimensions of Domestic Health Issues, a set of papers presented at the 1999 annual meeting of the Association of Academic Health Centres, takes a broad view of those health issues, transcending delivery of care to encompass health professions education, research and policies that affect health. Thus, in this volume, distinguished speakers from the USA and abroad proffer answers to thorny questions of the age: "What role can academic institutions play in setting the global agenda for health and mitigating health problems? Although cost, quality, and access are common problems around the world, how do national circumstances – history, resources, and culture—contribute to distinctive approaches to health care? What are some of the practical and ethical issues that arise in the course

of technology development and multinational clinical trials? What are the implications of multinational credentialing for our educational institutions, for health workforce migration, and hence for access to health care?

1999

1999.1 Kindig DA, Dunham NC, Eisenberg JM. Needs and challenges for health services research at academic health centers. Acad Med 1999;74:1193-1201

What are the institutional strategies used by academic health centers and other academic institutions to support and maintain the infrastructure that promotes health services research? Using the findings from interviews conducted in late 1998 with health services researchers at ten health services research centers of several types and from several geographic areas, and with the directors of ten health services research training centers, the authors address this key issue by examining four central infrastructure needs and challenges for health services research: (1) organizing core institutional resources (most centers received some level of core financial support from their parent organizations); (2) supporting career development of individual researchers (the more competitive health care system may diminish the ability of academic health centers and other institutions to give such support, but certain opportunities were noted); (3) supporting and enhancing training in health services research (such support comes from many different disciplines and organizations; the typical career path is in academic settings); and (4) establishing and supporting research partnerships (there are growing opportunities for such alliances). The authors research a number of conclusions from their study, including the fact that there are a wide variety of models of successful health services research centers, with very different missions, organizational and interdisciplinary configurations, research and policy objectives, and collaborative relationships. Additional studies are needed to further specify those infrastructures elements that foster effective and productive health services research in academic health centers and other university settings.

1999.2 Holmes DE. Reflections on Globalization of Health: Consequences of the 3rd Trilateral Conference. Assoc. of Academic Health Centres. 1999.

Canadian delegates identified the need to integrate the activities of the Canadian Public Health Association much more closely with those of the nation's academic health centres. Each side has been working a bit of isolation from the other and should be engaged in dialogue about better coordination of effort. In addition, given the perceived need for more focus in universities on global health, the Association of Canadian Medical Colleges will try to encourage universities to set up centres or divisions on international public health so that these issues can permeate the curricula and become more of an influence in research.

Secondly, the Canadian delegates will seek opportunities to speak to their own organizations and government officials to increase awareness of the importance of global health top world peace and to the global economy. In research for example, there is an opportunity because the Medical Research Council is considering recognition of its institutes. They all ready have been given a focus on international research collaboration , and on public health.

Third, there is a need for a coordinated mechanism for ongoing efforts in public and global health within Canada. APMC has agreed to take on this task, which will entail identifying a member from each university who has been involved in public and global health. The project will require the development of a database of activity and will also identify the gaps. Finally it will entail development of a forum for periodic discussion. Perhaps, Industry Canada, which has a health branch, may be willing to help, either to fund this effort or to meet the gaps that are identified.

Because of the existing telemedicine programs, there is a tremendous opportunity to continue and expand international collaboration. Canadian involvement in aboriginal health adds much to the application of telemedicine to the needs in developing countries. Information technology also permits the sharing of information and the sharing of technology.

1998

1997

1997.1 Ontario Medical Association Integrated health systems: A discussion document for physicians April 1997

This document identifies some of the questions that physicians and communities will need to consider when contemplating the development of an integrated health system. Readers should note that there are no “right” answers to many of the questions and that others cannot be answered until government puts forward its policy framework for integrated health systems. It is important to recognize, however, that it is necessary to raise, discuss and resolve these issues in order to successfully implement an integrated system.

1997.2 PCCCAR Reports: Task Force on the Funding of Academic Health Science Centres. Funding academic health science networks: an investment for the future. September 1997

1996

1996.1 Aschenbrener CA. News from the future: Health care summit caps decade of transformation, 1996-2005. Acad Med 1996;71:823-82

Many in academic medicine agree that in future will be very different from the past. Transformation, not tinkering, is needed academic health science centers are to arrive the challenge posed by federal and state budget constraints, the intense price competition of managed care, and the wide dispersion of information via the Internet Academic medicine is like an ocean liner, stately and slow to turn from its chartered course. But those who captain the huge, slow ship have seen the tip of the iceberg that looms in its path, and must turn to a new course now. The author present a possible scenario of the future that describes new relationships, among academic health centers, new roles for deans and department chairs and a more collaborative approach to learning in the scenario, set in the year 2002, the writer looks back on the changes of the period 1996-2005 and describes the relationships, management, priorities, and reward systems of the institutions responsible for health care, medical education, and biomedical research.

1996.2 Deckers PJ. Academic medicine: As threatened as most would have us believe? *Gynecologic Oncology* 1996;62:151-156

All academic health centers (AHCs) are threatened by the complexity of health care reform and by the speed with which it is occurring. We have been forced in all areas of our academic and clinical life to reassess the way in which we have traditionally operated. We must, in fact, do more than reassess. We must change fundamentally. This is true whether one considers medical education, biomedical research, or clinical services. Practically speaking, health care reform forced on us by the business community of America realistically means downsizing unless faculties are willing to change and pursue novel contemporary opportunities. It means less money and the need to do more with what we have. Educationally, we must emphasize the training of generalist physicians. On the research side, it means interdepartmental collaboration around core program project initiatives. It means a sharing of resources (including space) and the need to develop quality relationships with industry and philanthropic organizations. On the clinical side, we must develop a fully integrated, highly competitive, cost-efficient physician/hospital organization, and most AHCs must become part of a larger integrated delivery system to protect not only clinical but academic interests.

1996.3 Shea S, Nickerson KG, Tenenbaum J, Morris TQ, Rabinowitz D, O'Donnell K, Perez E, Weisfeldt ML. Compensation to a department of medicine and its faculty members for the teaching of medical students and house staff. *New Eng Jr Med.* 1996;334:162-167

Background: Changes in the organization and financing of health care threaten to alter the prevailing system of financing the teaching of medical students and residents. Little information is available from private medical schools and teaching hospitals about the extent of teaching by faculty members or the mechanisms and levels of reimbursement for teaching.

Methods: We surveyed faculty members in the Department of Medicine at Columbia-Presbyterian Medical Center to ascertain the extent of their teaching activities. A standard number of hours was assigned to each activity, and the total number of teaching hours was calculated for each faculty member. Teaching of fellows and in continuing medical education programs was excluded. We also determined how much money the Department of Medicine received in payment for faculty members' teaching activities, and the sources of this compensation.

Results: In the 1992-1993 academic year, the 188 full-time faculty members spent a total of 46,086 hours teaching (mean [\pm SD], 245 \pm 178 hours per faculty member); 10,780 hours (23.4 percent) were spent teaching medical students, and 35,306 hours (76.6 percent) teaching house staff. Eighty percent of faculty members taught for 137 or more hours each. In a multivariate analysis including faculty rank, subspecialty division, years since graduation from medical school, sex, and tenure or clinical track, we found that senior faculty members ($P=0.02$), members of certain subspecialty divisions ($P<0.001$), and women ($P=0.05$) contributed more than the average number of teaching hours. An additional 56 non-full-time faculty members contributed a total of 5684 hours. The net reimbursement to the department for teaching totaled \$965,808, or about \$16 per hour of teaching by full-time

faculty members, after the cost of fringe benefits was excluded.

Conclusions: Faculty members of the department of medicine at a major medical center contribute a large number of hours teaching medical students and house staff. This effort is poorly compensated. Cost-containment efforts have the potential to jeopardize fragile social contracts at academic health centers whereby the faculty participates in teaching by contributing unreimbursed or underreimbursed time.

1996.4 Wilson DE. Whither academic health centers? A commentary. Jr Assoc for Acad Minority Physicians 1996;7:56-61

Academic health centers (AHCs) currently face the greatest challenge of their entire existence. Managed care, increased competition for research funding, and inefficiency all contribute to the present vulnerability of AHCs in the cost competitiveness of today's health care marketplace. The increased reliance of medical schools on clinical income to subsidize undergraduate and graduate education and biomedical research now jeopardizes the success of their missions, since clinical income is declining. While AHCs must make significant changes to adapt to the new environment, left on their own in the marketplace, many will not survive. Additionally, the biomedical research advances and high technology medical care that we have come to expect in this country will also likely suffer. A national approach designed to preserve responsive AHCs is needed.

1996.5 Weitekamp MR. Thorndyke LE. Evarts CM. Strategic planning for academic health centers. Am Jr Med 1996;101:309-315

The mission, indeed the very existence, of the traditional academic health center is under siege. Changes in the financing and delivery of health care threaten the clinical revenue used to subsidize the tripartite mission of education, research, and patient care. Market practices, driven by the growth of managed care, will intensify the impact of declining revenue to threaten the actual patient base necessary to sustain these endeavors. The survival of academic health centers depends on their ability to change. This change will not be easy, and the size of the collective academic medical establishment will decrease. Successful enterprises will be those that go beyond incremental, reactive adjustments. Nothing short of organizational redesign, creation of strategic partnerships, and adopting a cybernetic model of continuous measurement, improvement and adaptability will suffice. Using the elements of a strategic planning exercise, this paper reviews the background issues that have produced the current predicament and explores the strengths and weaknesses inherent in academic institutions. Elements of an "idealized" academic health center are postulated and, finally, specific strategies that might be considered in creating a relevant and secure future are proposed.

1996.6 Campbell S. Reinventing AHCs to meet financial, clinical, research and educational demands. Health Care Strategic Management 1996;14:18

Declining profit margins for clinical services are forcing academic health centers to look for other ways to increase revenues to support their research and education missions. One revenue source is the sale of research and education products on the private market.

1996.7 Fargason CA Jr. Fargason RE The changing academic health center. The death of the traditional academic physician. Physician Executive 1996;22:22-24

Organizational change is required if academic health centers (AHCs) are to survive the decreased societal commitment to them. The changes will generate significant emotional responses in the physicians employed by such institutions. This article presents an analogy between the reactions of academic physicians to the changes they are experiencing, and the stages of grief that Dr. Kubler Ross described in terminally ill patients. By placing physician responses in this context, emotional responses to organizational changes can be more easily understood and managed, allowing academic physicians to devote more energy to facing the threats to AHCs in an innovative and constructive manner.

1996.8 Shulman LE. Clinical research 1996: stirrings from the academic health centers. Acad Med 1996;71:362-363

1996.9 Vavala D. The new academic health center hybrids: part business, part academic. Physician Executive 1996;22:5-10

Academic health centers have flourished since the 1960s and even managed to survive the shift toward prospective payment. But in their current quest to expand the number of managed care patients and compete with the private sector, they often must price services below cost and reduce the number of faculty members and other personnel. Unless their prices are competitive, managed care companies will not do business with them. AHCs that cannot compete find they are overbedded, underused, and in turmoil. This article explores what successful AHCs are doing to stay healthy in the managed care era.

1996.10 Rowand RS, Smith ER. Medical education and the changing hospital environment: A discussion paper for consideration at the ACTH Invitational Conference. Oct. 4, 1996

The challenge for leaders in academic health centres – the partnership between faculties of medicine and teaching hospital – is to find approaches to the mutual accommodation of service and educational needs. In its 1995 policy paper, the ACMC/ACTH Committee on Academic Health Science Centres argued that there is a need to renew partnership between the universities, agencies responsible for delivery of health care services which also serve as sites for clinical education, and government. The recommendations made were broad in nature and oriented at a macro level to the health system. Assuming that the changing structure and financing of health care are given, participants are asked to address the following questions:

1. Given the trend towards ambulatory and community-based care, what changes are required in university-based medical education programs and hospital-based service programs to permit the achievement of common objectives?
2. Are there new approaches to financing hospital and health care services, physician services, and the universities which would better assure preservation of service and academic missions in academic health science centres?

3. Are there lesion in initiatives like EFPO and CanMEDS 2000 which should be priorities by teaching hospitals and faculties of medicine for implementation?
4. Are there new structural and organizational approaches to improving the interactions between universities and teaching hospitals which will strengthen and contribute to the achievement of shared goals?
5. What is the appropriate role that should be played by faculties of medicine and teaching hospitals in improving population health?
6. Are there new models of care delivery which would enhance the opportunity of faculties of medicine and teaching hospitals to achieve common goals?

1996.11 MacLeod SM. Future of Medical Schools: Transition and Turmoil: The work of a medical school dean. Education for Health 1996;9:13-24

The challenge for medical schools and their deans has never been greater. The pace of change in the health care environment is frenetic and often creates apparently competing demands. Effective leadership requires a balancing of university roles with health service responsibilities. Clinical service must be meshed with research and education, so that all three activities are complementary. Increasingly the medical school must mediate between individual concerns for curative care and population demands for “wellness” disease prevention. Economic reality dictates that medical schools and their leaders must evaluate the evaluate the benefits of cost minimization against optimal health outcomes.

Demands for decanal leadership derive particularly from the recognition of a role for academic research in supporting resource allocation decision making and health policy making. The medical school should lead public opinion and public policy in health areas. This must be achieved while sustaining the atmosphere of learning, research, integrity, innovation and medical professionalism that has previously earned public trust for these institutions. The dean must be the personification of advocacy for health reform while maintaining institutional equilibrium and the highest standards of professional education. This essay reviews the critical challenges for medical schools from the dean’s vantage point.

1995

1995.1 Nat Conf on Future & Funding of AHSCs Fulfilling the Mission:Conference Summary. 1995(Apr 6-7) HHR Planning ON Ministry Health

This document provides a series of papers that were presented under the following headings:

- Visions of the academic health sciences centre
- Defining the social contract for contemporary AHSC
- Alternative funding for AHSCs
- Summary

Only the first 26 pages are contained within the PDF that was distributed at the National Task Force Meeting, December 5, 2008.

1995.2 Martin JB. Academic health centers. Vulnerabilities in 1995 and beyond. Arch Int Med 1995;155:1045-1048

Resources to support biomedical research in the nation's academic health centers are under considerable threat. Particularly vulnerable is the clinical research enterprise. New strategies and prioritization will be required to maintain the vitality of our clinical research and education enterprise.

1995.3 Shine KI. The future of academic health centers. Physiologist 1995;38:51-55

1995.4 Bondurant S. Health care reform continues: themes for academic medicine. Acad Med 1995;70:93-97

The challenge for U.S. academic medicine in this decade is to redesign itself to serve its classic functions-teaching, research, and special service to patients-while filling the needs of what is evolving into a comprehensive integrated system of health care. First, in the absence of federally legislated comprehensive health care reform, the health care community must develop a consensus on the purposes, scope, and content of health care to bring some reason and order to the short-term, market-driven incrementalism that governs today's health care. Specifically, the author proposes that the issues of health care be defined in a broad social context, that the gap between public health and medicine be lessened, and that perspectives of public health and health promotion and disease prevention be more effectively incorporated into medical education. Second, there is an urgent need for new approaches to funding and financial management of teaching, research, and patient care in academic health centers to counter the erosion of traditional sources of support. Third, to sustain generalist physician practices of high quality, a conceptual basis for generalism must be defined in affirmative functional terms, and the generalist's frame of reference and intellectual tools and processes must be formulated. Last, many forces are now acting to reduce the intellectual content of medical practice and teaching. Academic medicine-in teaching and in research-must nurture and promote the intellectual content and standards of all aspects of medicine to sustain the quality of clinical practice over time.

1994

1994.1 Valbert LS, Gonyea MA, Sinclair DG, Wade J. Planning the Future Academic Medical Centre: Conceptual Framework & Financial Design. ISBN 0-920169-51-1

This report provides the cornerstone review of academic health centres in Canada at the time. It is divided into 6 chapters as follows:

- Introduction
- Principal Issues Surrounding AMCs

- A Conceptual Framework
- Prototype Academic Medical Centre
- United States Academic Medical Center
- Transition from Medical Centres to Health Organizations

All chapters are vital reading but Chapter 6 “Transition for Medical Centres to Health Organizations” is reproduced in this review:

Chapter 6 - Transition from medical centers to health organizations

Out of the financial adversity of recent times has come realization by most institutions participating in AMCs that collaboration and interdependency offer greater potential for individual and collective institutional achievement than does competition. Moreover, contemporary circumstances require physicians, nurses, rehabilitationists, pharmacists and many other health professionals to work as teams in the service of patients and populations. AMCs, once organized, must rapidly evolve to AHCs, in which many health professional faculties and schools participate. In addition to teaching students and conducting research and scholarship, clinical appointees will increasingly be involved in providing professional service to patients and populations, working as members of teams of health care providers. Similarly, as the term medical is replaced by health, so will professional education, research and professional service and patient services shift from teaching hospitals to community-based agencies responsible for the provision of services to patients and populations in noninstitutional settings. The concept of AMCs and their subsequent development into AHCs has firmly taken root; it now remains for them to grow and blossom.

The advantages of the formation and regional operation of AMCs have also become apparent to provincial governments. The Wade report in Ontario,³¹ Bill 120 in Quebec, as well as the Barer-Stoddart report^{47,68,69,79,123,124} to the federal and provincial ministers of health and a study by the Canadian Medical Association¹²⁵ of the impact of regionalization of health care illustrate the potential direction of government policy. As the now almost exclusive funder of universities, hospitals and community health agencies in Canada, government has become responsible for providing the financial resources necessary for all members of AMCs to discharge their social contracts. These institutions and the AMCs of which they are members have become, in effect, components of provincially regulated public utilities.

As with every large public utility, head office is hard pressed to deal effectively with every individual element. Therefore, it makes sense to promote the development of regional AHCs, each with a well-developed and explicit social contract with the population it serves, integrated in turn with the social contracts of the hospitals and community-based health service agencies that are not members of the AHC. Development of social contracts should proceed through the collaboration of AHCs with regional health councils formed through the association of district health councils in the regions concerned. This principle of pyramidal organization has proved effective in most circumstances in which those who pay ultimately for the services (i.e., taxpayers) can relate directly to the individuals and institutions that provide the services.

Although provincial governments remain understandably nervous about decentralization and devolution, governance and management of the many, complex elements of the health care system from and by central government is quite impossible, at least in jurisdictions as large as Ontario. AMCs and AHCs, together with regional health councils, offer governments the opportunity for closely controlled devolution of responsibility in a confined and circumscribed area of health care. The four key elements necessary for such an experiment in regional decision-making are:

- participants in nascent AMCs must develop effective systems for governance and management;
- district health councils must collaborate in the formation of regional health councils;
- governments must become confident that AMCs and AHCs will be accountable for developing and discharging a social contract with the communities and regional populations served; and
- the terms of the contract must be sufficiently explicit to permit matching of health professional education, research, and health care services directly with the resources provided from the public purse.

The first of these elements requires adoption of one or another of the organizational-models designed to make AMCs and their successor organizations work effectively. Present university affiliation agreements for governance and management are often not sufficiently coherent to address the fundamental problems with funding and organization of AMCs. The consortium model in the form of teaching hospitals' councils or joint liaison committees has been used in several centres to enable strategic planning. However, authority for carrying out the plan and matching goals and program objectives with resources remains with the individual institutions. Where achievement of the AMCs aggregate social contract is frustrated by individual interests, the federation model can address the problem; planning, policy development and implementation, the coupling of goals and objectives to resources, accountability and dispute resolution are vested in a single federated board. Corporate merger and holding company models are less applicable, for reasons given earlier, to the present evolution of AMCs in Ontario.

Adoption of a suitable organizational model for governance and management requires strong leadership by the university concerned. Beginning with the affiliation agreements or other arrangements, it should work assiduously to develop comparable agreements with the community-based institutions and agencies that will become members of the future AHC or academic health organization (AHO). It is also a primary responsibility of the university to establish internal structures to bring its health professional faculties and schools together, to create overlapping, interdependent curricula and the intellectual climate necessary for team-building, first among faculty members and then students in the different health professions. This is an essential first step in the transition of the AMC into an AHC.

Adoption of a federated board or equivalent organization provides a mechanism by which participants in the AMC or AHC can develop an aggregate social contract. The challenge of developing an appropriate social contract for health professional education, scholarship and research rests primarily with the university and participating research institutes and

centres. Developing a social contract with the local, district and regional communities is primarily the task of the hospital and health care institution members working with regional and district health councils. Obviously, the university is also involved, given its predominant role in recruiting qualified faculty members. All member institutions will have a major stake in developing appropriate consultative mechanisms to assess the genuine needs of the communities for health care services and in developing, along with representatives of those communities, a satisfactory social contract. Once developed, that contract can only be discharged if the member institutions work together. Apportioning its elements to individual member institutions so that each will have responsibility to contribute to the work of the AMC and future AHC and AHO will be a major test of the capacity of the organization for effective governance in common. So also will be rationalization and sharing of services. It is primarily through eliminating duplication and achieving maximum economies of scale that resources will be made available to provide AMCs with the increased degree of flexibility so necessary to inventive organizations with the responsibility of discovering new and better ways of doing things.

The challenge of creating effective, responsible and accountable AMCs also falls on government. The individual and institutional members of AMCs cannot be expected to discharge their responsibilities to their student and regional populations effectively without the human, financial and physical resources necessary to do the job. Contemporary governments have inherited substantial deficits of more than financial dimensions in respect of AMCs. For many years, the long-term goals and objectives of health professional education and research and scholarship have been heavily subsidized by the professional service responsibilities of clinical teachers, especially in faculties of medicine. These deficits must be eliminated through appropriate funding of the time that health professional clinical teachers devote to those constituent deliverables if AMCs are to meet the challenges of the rest of the 20th century and the 21st.