

**University of Minnesota**  
**AHC STRATEGIC PLANNING INITIATIVE 2000**  
**Dental Subcommittee**  
**Phase I Final Form**  
**4/17/2000**

**Introduction:**

This report is the Phase I response of the School of Dentistry to the charge given by Dr. Frank Cerra, Senior Vice President, to the executive committee for AHC Strategic Planning Initiative 2000. This charge takes the form of 6 defining questions raised in Dr. Cerra's speech of October 25<sup>th</sup> 1999, and reiterated in his email memo "AHC Strategic Planning Update" to the AHC Community on January 24<sup>th</sup> 2000.

Since Phase I is a college response, this report is organized at two levels:

1. In the first level the Academic Health Center is considered as an integrated whole. It is our understanding that the principal driving force behind the strategic planning effort is to identify ways in which the component units can more effectively function together as an integrated AHC. It is believed that this will lead to new, innovative ways of working together and that collaborations will be identified resulting in a synergistic outcome with the whole AHC greater than the sum of its individual parts. This should also result in more effective use of limited resources.

2. There is a second level, which is an important and necessary part of the process. Our deliberations have uncovered key problems facing our individual unit. These are not always clearly linked to the first level. The School of Dentistry is uniquely charged with providing quality clinical dental care, producing quality dentists and dental hygienists, and investigating the many questions affecting oral health and disease. A culture, parts of which are unique, is not peculiar to our School, but is common to all of the units within the AHC to some degree. Each of us is charged with a well-known tripartite mission, which is linked to our own discipline. This results in unique cultures in terms of service, education and research.

It is our hope that future phases of the strategic vision process will give appropriate weighting to the first and second levels of this and other reports. Our ability to work together as an innovative AHC system is predicated entirely on each individual unit's strength in meeting its core mission. In summary, we need to foster a close relationship for those activities which should be shared and we need to foster opportunity for the unique things each of us do.

**Process:**

The Dental Team consisted of a core committee of 6 members and 13 dental advisors. The committee was comprised of Chair, William Douglas and members, Gary Anderson, Kathy Newell, Bob Ophaug, Don Simone, and Dan Skaar. Following an invitation to the dental faculty for nominations, the following advisors were selected: Bruce Pihlstrom, Noah Sandler, Steve Shuman, Darryl Hamamoto, Mark Herzberg, Jorge Perdigao, Joy Lua, Joel Rudney, Mike Speidel, Gary Hill, Nelson Rhodus, Burt Shapiro, and Jill Stoltenberg.

Advisors were selected primarily on the basis of knowledge and interest in topics pertaining to the six defining questions, and secondarily in an attempt to represent the School's divisions and departments. In an effort to discover the thinking at the "grass roots" faculty level, all invited advisors were working faculty. No administrators or department chairs

were included in the selection, since it was believed that they would be included in later phases of the planning.

The committee invited advisors for a series of noon plenary meetings, with 3-4 advisors per meeting. In this context the defining questions were debated. In an equal number of other meetings, the committee alone reduced the minutes from the plenary meetings to the form presented here.

Each of the following defining questions carries an implicit problem or difficulty to be dealt with. Our responses to these questions take the form of bulleted items of various lengths. The responses are either in the form of a suggested solution, an approach, an observation, or a concern. It will be clear from the context, which of the kind of response is being made.

Some of the responses cut across more than one question, and it is the committee's belief that these may offer more viable and credible opportunities for integration and participation within the AHC.

### **Six Defining Questions:**

#### **1. What is our role in the health of Minnesotans- our land grant mandate?**

##### A) AHC Level

- Our role is to provide access to Health Care for all citizens and Minnesota residents. This must now become a primary focus of effort and the standard by which we measure our success.
- AHC must recognize the importance of quality of life Healthcare services for our patients. As life span increases, there is a need to place an increasing emphasis on services, which improve quality of life, in contrast to more traditionally supported acute medical services. Dentistry, physical therapy, occupational therapy, nursing, pharmacy, public health and varied medical disciplines all have important contributions to make.
- Training of HealthCare professionals who can serve effectively in all demographic sectors and locations within our State.

##### B) Dental School Level

- Address the disparity of "access to dental care" issues within the state. Access to dental care is a state and national problem recognized at all levels. An approach should be developed to the following opportunities: 1) Dental outreach programs for under-served populations, which integrate with comprehensive health care initiatives. 2) Delivery of dental care at the School for Medical Assistance and Medicare Patients as long as operationally feasible.
- Train dentists who are able to diagnose and treat a broad range of dental conditions needed by an aging Minnesota population. Address on an interdisciplinary basis the medical implications of dental diseases and associated therapies.

#### **2. How will we be a real player in the health-care delivery process?**

##### A) AHC Level

- Much of what has been said under Question 1 could be repeated here. We must become the provider of choice, by ensuring patient satisfaction, and meeting all of the health care needs.
- The AHC must function as a seamless integrated health care system, offering comprehensive health care coverage.

##### B) Dental School Level

- Dentistry should contribute more to the creation of a seamless, integrated health care system within the AHC. This can be achieved through activities of the Hospital Dental Clinic/ General Practice Residency in caring for medically complex, transplant and cancer patients. Other services should be provided by the divisions or programs in Oral and Maxillofacial Surgery; the Maxillofacial Prosthodontics; Pediatric Dentistry; TMJ and Orofacial Pain. The consulting and diagnostic services provided by the Divisions of Oral Medicine & Oral and Maxillofacial Radiology and Oral and Maxillofacial Pathology should also be included. These clinical services must address issues of referral, service, and contracting for all AHC patients. The AHC must gain fuller awareness and appreciation for the skills of all players within the AHC.
- Build on the existing models within the AHC outreach, such the Wilder Center which started as dental outreach and has grown into AHC outreach. Another excellent example is the Cleft Palate Program within the Dental School, which involves a broad range of disciplines in surgery, medicine, dentistry and sociology.
- Remove the physical and other impediments to care, and patient-centeredness. Improve parking, Signage, and provide information staff and coordinators, to improve interaction and patient flow between the varied clinics of the School of Dentistry.
- The Dental School needs improvement to its 25-year old infrastructure. In a way these clinics are our dental “hospital” (as it were) and they are critical to our efficient participation in the delivery of patient care.

### **3. What is our vision for the health-care professionals that we train?**

#### **A) AHC Level**

- Improve School of Dentistry Contribution to AHC Curriculum: There is a strong belief that Dentistry can contribute to the education of other health care professional students regarding oral health and disease. An organized educational process regarding dentistry for the rest of the AHC should be considered. Such interactions among the AHC units will train health care professionals skilled and comfortable with providing care within a team setting.
- Improve Basic Science Curriculum: The basic science curriculum can be shared across the AHC, but up to a point. Once the common background is delivered, there is a strong sense that discipline specific material within dentistry is of importance. This is likely true in the other units.
- Develop Multiple Degree Opportunities: Promote flexibility for unique academic programs leading to degrees in multiple disciplines. E.g. DDS, MD, PharmD, PhD. This should be considered in the broadest sense across the entire University, e.g. JD and MBA. The human resources/appointment system for the University should support these options. This flexibility may produce our future leaders.

#### **B) Dental School Level**

- Institute Curriculum Review: There is need to set up a process for continual curriculum review and revision based on evidence. If outdated techniques are dropped from the curriculum it will allow inclusion of new development/technology, e.g. complete dentures dropped and dental implants added.
- Train Evidence-based Practitioners: The practice of general dentistry continues as a technical, surgical field and graduates must be ready to practice immediately upon graduation (unlike our medical colleagues with mandatory residency programs). Careful thought and consideration needs to be given to the development of graduating dentists with critical evaluation skills, who are still competent surgical technicians. Consideration should be given to expanded technical duties for support staff, e.g.

dental hygienists, analogous to the nurse practitioner of medicine (there is already some evidence for this in orthodontics). Current and future graduates must be trained in disease management as well as surgical intervention. The role of science in the clinical curriculum, beyond the basic science courses, is of great value in the teaching of critical thinking skills. This will require a new role and new incentives for clinical faculty. In some cases it may require different faculty. The present and future roles of the Patient Care Groups (PCGs) need to be carefully assessed.

- Implement Riverwood Model: There is interest in a faculty-driven model for clinical dental education with improved translation to the current practice of dentistry as compared to our current clinical organization. It will require data management support, faculty commitment and manpower, and possibly increased staff and materials. This model would facilitate the training of evidence-based practitioners in dentistry and dental hygiene. A plan for this model has been outlined in detail by Dr. Ralph Delong, Dr. Gary Hill and others, but has not been implemented due to lack of resources. (This is referred to elsewhere in this report).
- Extend Clinical Outreach: This activity could compensate for educational experiences and exposures unavailable on site. Downsides are loss of clinical income and difficulties in standardizing faculty instruction and assessment.

#### **4. How will we achieve top ranking in research performance?**

##### A) AHC Level

- Hire faculty willing to interact across the AHC, “The opportunities are huge for those who reach out.”, and there are many successful examples within the Dental School
- Create “incubators” built around a research question, e.g. pain, where dental faculty have realized considerable success through interaction. Incentives for these interactions must be real, as at times our most effective cross-disciplinary collaborators within Dentistry are penalized by our P&T system.
- It is important not to discount the individual investigator’s ability to identify future questions of importance and forge the relationships necessary for effective investigation. Good research is not usually “top down”, but “bottom up.” The AHC environment needs to be flexible enough to provide opportunity for this, at times unpredictable process, and not tie up all resources in the large-scale efforts driven from above.
- Large, expensive technologies can be shared – but we need to ensure equitable access.
- Strengthen existing NIH competitiveness, but seek out new partnerships in the research enterprise. These may include industry, foundations and institutes. This may require a cultural change and seeking of new mechanisms of research administration that mesh with strategic plans of new partners.

##### B) Dental School Level

- Research should be expanded in relation to service. Examples would be: - increased emphasis on health services research, and prevention of dentally related diseases.
- There needs to be renewed emphasis on clinical research, and particularly clinical measurement methodologies, with a view to developing better evidence-based treatments.
- The School has a responsibility to find ways to support oral health research, which may not show direct connections to the rest of the AHC. This case must be effectively made at the highest levels of the AHC.
- There is a need to develop further interdisciplinary research within the Dental School. Some dental, masticatory and oral problems can only be solved by recruiting technology from other disciplines.

- There is a need to determine what the scientific and scholarly profile of the dental faculty should look like in the 21<sup>st</sup> century. There is a need to assure ourselves that we are training people who can fulfil these expectations. We need a system of rewards and retention for faculty who can fulfil such expectations.
- There is a need to supplement NIH dental funding with that from industrial and other sources (as noted above). This particularly germane in dentistry because of the large domestic dental industry within Minnesota (approx. 1 Billion dollars in revenues)

## **5. How do we exploit the technology of the electronic age?**

### A) AHC Level

- Electronic patient records are required to enable more effective delivery of integrated care across the AHC.
- It is suggested that there be the development of high-speed lines to transfer large images and large files and enable true electronic data conferencing.
- Develop Digital Medicine, which consists of intelligent 3D renditions of the patient on the screen to encourage new methodologies in education, diagnosis, cooperation and long distance consultation.

### B) Dental School Level

- There is a need for an information system, which can provide data for patient management, outcome assessment, student evaluation, faculty evaluation, billing, etc. This is also required for the so-called Riverwood Model in dentistry, where the faculty take primary responsibility for patient care and distribute the cases to the students under their supervision. Such an information system would facilitate certain aspects of Health Service research.
- Develop The Virtual Dental Patient, which is a subset of Digital Medicine, as described above, and for the same reasons. Because of the ease of access to the mouth, Dentistry offers a particularly attractive opportunity to develop advanced digital systems, which could revolutionize all aspects of dental education and patient management. This is already a funded NIH program within the Dept of Oral Science. However continued development towards a practical system will require AHC support.

## **6. How do we develop a culture of service and accountability, in both internal and external relations, with an environment of good communication and consultative decision making?**

### A) AHC Level

- It is likely that if the other questions in this report can be addressed that a measure of positive cultural change will be achieved spontaneously within the AHC and its constituent colleges.
- More specifically, the faculty in the varied AHC units would benefit from better understanding and respect of each other's skills and abilities.

### B) Dental School Level

- There is need to improve internal communication and to build a sense of trust within the School of Dentistry. An appreciation for the importance of all of the players within the School needs to be fostered.
- Clinical Track Faculty: There is need to develop clear job descriptions for the Clinical Track faculty, which includes some level of scholarly activity. This could be linked to merit incentives such as longer contracts. The Clinical Track faculty should be made voting members of the School. Increased scholarly activity throughout the clinical faculty would foster an appreciation for the scientific method and clinical thinking on the clinical floors. This is vital to the training of evidence-based practitioners.

