The Washington Advisory Group
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Final Report

of

The Washington Advisory Group
an LECG Company

on

Planning for a 21st Century Medical School

at the

University of California, Merced

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EXECUTIVE SUMMARY

The University of California at Merced (UCM) recognizes that the residents of San Joaquin Valley have an urgent need for increased access to quality health care services and improved health status. Despite its relatively young age, the campus faculty and administration have determined that it can best serve the region's health needs by establishing a medical school that would not only educate and train physicians for the Valley, but would also serve to advance the understanding of health needs of its residents and work to improve their health. In the spring of 2008, convinced by the compelling vision put forth by campus leadership, the UC Board of Regents approved the continued planning toward the establishment of an independent, accredited new medical school at UCM.

The start date for a new fully independent medical school was initially envisioned for as early as 2012. The recent economic downturn in the State of California and the nation as a whole has necessitated a reconsideration of the planning timeline. The commitment to establish an independent UCM medical school is undiminished; the question is not "if" a medical school at UCM, but merely "when."

The Washington Advisory Group (WAG) was engaged by UCM to assist in scoping the planning effort and in evaluating the planning assumptions. The principal recommendations that WAG makes in this report are:

- Postpone the request for Regental approval of a new, completely independent medical school until the financial circumstances are more propitious.

- Plan for three stages in developing a fully independent medical school:

    1. A pre-baccalaureate Biomedical Education Track specifically designed to attract undergraduates of exceptional promise to pursue a BS degree that emphasizes the health needs of the Valley and that prepares students for advanced study in all of the health sciences (including the study of medicine at UCM or elsewhere). Special consideration would be given to Valley residents from less advantaged and more culturally diverse backgrounds. This program would enhance the likelihood that UCM students would return to the Valley to bolster the health professions workforce.

    2. A "branch campus" phase that would start the proposed medical school in conjunction with UC Davis School of Medicine. (Note that several existing medical schools began as branch campuses.) During this phase, a select cohort of students (e.g., 16-24) would be admitted into a UCM-specific program of medical study emphasizing, along with the medical school curriculum, the health needs of the Valley; the existing University of California PRIME program offers an attractive pattern for this program. This phase might also include the creation of a "post-baccalaureate" program to meet the needs of graduates of UCM and

elsewhere who require additional course work in preparation for application to medical school.

3. A fully independent, UCM medical school. Postponing the request to establish an independent new school, rather than working a hardship, would give UCM the time both to develop a truly compelling and innovative proposal and to gain much useful experience in medical education by functioning for a period of time as a "branch campus" of an existing UC school.

- Take full advantage of the "blank slate" opportunity afforded by a new school to introduce path breaking innovations in the content and processes of medical education. Such "green field" opportunities come along rarely and offer UCM the chance to establish itself as a leader in medical education nationally. Hence, UCM should:

    1. Modernize the content of the medical school curriculum to ensure that it is fully aligned with the expectations and needs of the public in the 21st century

    2. Utilize new and evolving information technologies to create novel pedagogical approaches and other innovations that will facilitate acquisition of requisite competences and prepare students for life-long, self-directed learning.

- Engage experienced medical educators from UC Davis, UCSF Fresno and other UC campus, as well as representatives from select regional hospitals and clinics in planning for the new UCM medical school. An additional benefit of extending the timeline as suggested is the opportunity to recruit additional UCM faculty with the relevant expertise and experience needed to staff a successful planning process.

- Specify the criteria and the process to be used in selecting the regional clinical facilities that will serve as principal affiliates for implementing the academic program. Potential partners need a better understanding of the financial, facility, GME, and faculty resources needed to enable them to play a key role in the proposed academic program.

- Continue ongoing planning efforts aimed at mounting a robust health sciences research program that would be fully integrated with the investigative and scholarly activities of campus-wide faculty. A strong research program, while an essential component of a premier medical school, need not be extensive at the very inception of a new school. A UCM health sciences research program has the potential to generate the new knowledge critical to solving the most vexing public health problems affecting residents of the San Joaquin Valley and beyond. As a microcosm of unmet health needs world wide, the Valley is a natural "laboratory" for examining critical questions on the global health agenda.

I. INTRODUCTION

The University of California, Merced (UCM) is the newest of the University of California System's campuses. It opened in 2005 with three schools – Engineering, Natural Sciences, and Social Sciences, Humanities and Arts. Shortly thereafter, UCM began planning for a school of medicine, as well.

A. The Rationale for a UCM School of Medicine

The reasons for establishing a new medical school in California are compelling. California currently ranks 20th in physicians per capita; its population is aging, is remarkably diverse, and continues to grow at a faster rate than that of the nation as a whole; and it is predicted that in the near future California's physicians will leave their medical practices in larger numbers than new physicians will be added to the workforce. Recent projections suggest that California will require as many as 17,000 more physicians by the year 2015 to fully meet its residents' needs. The capacity of California's existing medical schools to produce new physicians for the state is woefully short of meeting such needs. California ranks 40th (out of the 45 states with medical schools) in the per capita number of first year slots available in in-state medical schools. As a consequence, fully 60% California's college graduates who matriculate to a US medical school do so outside of California.[1]

And while the need for physicians in the State as a whole is great, the need in the San Joaquin Valley of California, UCM's primary service area, is even greater. The San Joaquin Valley is among the fastest growing areas in the state and is already disproportionately underserved, having among its population a large number of low-income and uninsured residents. Moreover, the Valley is characterized by exceptional religious, cultural and ethnic, racial, and geographic diversity. These factors argue strongly for a UCM school of medicine that would be uniquely positioned to tailor its educational and service missions to deal with the Valley's specific needs. A UCM school of medicine would also be uniquely positioned to gain a better understanding of the health status of the region's population and to develop more effective ways to improve the region's health and quality of life, in addition to helping address the compelling workforce shortage. (We are using the term "Valley Agenda" to designate these goals.)

Over time, a UCM medical school clearly could become a major force for improving the region's health and economic well-being. Among the myriad benefits that would predictably flow from a UCM medical school are the following:

- Increased opportunities for students from the Valley to pursue careers in medicine and other health professions.

- Being of the region and imbedded in its multicultural heritage, UCM's commitment to diversity will facilitate the recruitment, retention, and support of a healthcare workforce optimally prepared to address the region's needs.

[1] www.aamc.org

- A growing number of physicians and other health professionals choosing to settle and practice in the Valley by virtue of having received their undergraduate and/or graduate medical education in UCM programs.

- Greatly expanded access to primary, secondary and tertiary clinical services as a result of the recruitment of the requisite number and quality of faculty to the medical school and its affiliated hospitals.

- Better understanding of the health needs of the region gained through the epidemiological and clinical research conducted by UCM faculty and students, especially in conjunction with affiliated institutions in the Central Valley (e.g., CSU Fresno)..

- Effective programs in health maintenance, patient education, illness prevention, and disease screening, informed by the new knowledge generated by UCM investigators and implemented by UCM students, faculty and staff.

- Advanced programs in continuing medical education to ensure lifelong maintenance of competence for healthcare providers in the Valley and beyond.

- Expanded opportunities for impactful collaborative research across the full range of academic interests of the UCM faculty and beyond at other universities and schools.

- Increased employment opportunities not only in the immediate vicinity of Merced but throughout the Valley as educational, research, and clinical programs are established.

- A locus for convening experts and stakeholders seeking solutions to overarching problems affecting the health of San Joaquin Valley residents (e.g., poverty, violence, unemployment, environmental stresses).

B. Role of the Washington Advisory Group

In May of 2008, the Board of Regents of the University of California System formally endorsed continued planning for a UCM school of medicine. Shortly thereafter, UCM invited Dr. Jordan Cohen, Dr. Mitchell Rabkin and Dr. Charles Young of the Washington Advisory Group (WAG) to Merced to meet with Chancellor Steve Kang, Associate Chancellor Janet Young, Dean Maria Pallavicini, and key faculty and administrative representatives to discuss ways in which WAG might support UCM as its planning for a medical school progresses.

As a result of these discussions, UCM retained WAG; a team of experts was assembled, led by Dr. Cohen and including Drs. Young and Rabkin as well as Dr. Michael Whitcomb and Micki Leder, Esq., to work with UCM. Brief resumes for these individuals are included in Appendix A. The WAG team, together with UCM, developed a scope of work projecting how WAG would support UCM's planning activities.

In broad terms, the role envisioned for the Washington Advisory Group was as follows:

- To advise UC Merced on a structured process for UC Merced's ongoing planning activities, addressing, for example, UC Merced needs for the planning effort and the possibility of a "Blue Ribbon" Advisory committee.
- To help the university articulate the mission and vision statements for the new school, focusing on the health care needs of the Valley and opportunities for innovation in education, research and clinical care.
- To evaluate the pros and cons of establishing a new medical school at UC Merced, and the merits of alternative models for the medical school.
- To propose concepts for curriculum development and evaluate potential sites for medical student education.
- To consider how UC Merced might integrate the existing and planned research programs on its campus.
- To evaluate the roles that UC Davis and UCSF Fresno might play in the new medical school.
- To provide a national perspective on new medical schools and on how established medical schools are positioning themselves for continued success.

The original charge to the WAG team and the proposed work plan is attached as Appendix B.

As WAG's work progressed, and at the request of UCM, the original work plan was modified in certain respects. For example, the WAG team held periodic conference calls with Dean Maria Pallavicini and Dr. Frederick Meyers to discuss WAG's progress and other issues as they arose. The specific details of the work plan were refined over time as a result of ongoing interactions and discussions between the WAG team and Dean Pallavicini.

C. WAG Methodology

WAG began its work by reviewing background information provided to it by UCM, including the Preliminary Proposal and Business Plan to Establish a UC Merced School of Medicine issued in September 2007. WAG met with UCM leaders, faculty and staff; members of the University of California Office of the President (UCOP) and chancellors of the University of California campuses with existing medical schools. Team members also met with administrators and selected physician leaders at potential partner sites for clinical affiliations and medical education; campus and medical school leaders at the University of California, Davis (UCD) and the University of California, San Francisco's Fresno campus (UCSF Fresno); and members of the Valley Coalition. UCM suggested a number of individuals and institutions for these meetings and WAG team members were able to meet with nearly all of them. WAG also met and had telephone conversations with Provost Ellen Wartella, Dr. Phyllis Guze (Executive Director for Medical School Planning) and other individuals who were involved in the planning process for the UC Riverside (UCR) School of Medicine. A list of individuals with whom the WAG team

met is attached as Appendix C, and a list of the background material team members reviewed is attached as Appendix D**.**

II. PLANNING FOR THE MEDICAL SCHOOL

A. Preliminary Program and Business Plan

The preliminary program and business plan submitted to the University of California Regents in September 2007 contains a great deal of useful information and thoughtful plans for the establishment of a UCM medical school. Clearly, much of the content in that document can be used in preparing a final submission to the Regents requesting approval to actually implement the plan. Portions of the plan are particularly well argued and substantiated, including those dealing with the inadequacy of physician coverage in the Central Valley, the contribution a UCM-based medical school could make to improving access to physician services, and the general focus that a school dedicated to improving the health of Valley residents should have. Discussion of the benefits of, and necessity for, a distributed educational and clinical program are also well thought through, as is the overall approach to the phased development of a UCM medical school.

The preliminary plan contemplated engaging UCD and UCSF Fresno initially to provide the venues and much of the faculty resources needed to establish a point of departure for further development. Following a yet-to-be determined period both for recruiting requisite faculty and for acquiring adequate funding and facilities, UCM would transition to an independently accredited medical school. The proposed organizing principle for the new school – that is, focusing the educational and research efforts on a Valley Agenda that is responsive to the specific health needs of the San Joaquin Valley – appears sound. And the plans to partner with a select number of regional health care institutions and individuals to implement a distributed model for clinical education also appear sound.

There are, however, several issues addressed in the preliminary proposal that we think deserve further consideration:

- The rationale for establishing a medical school at UCM is not limited to the desire to meet physician workforce needs. As noted above, a UCM medical school would also advance the understanding of health needs of the region and help devise improved ways to organize and deliver healthcare services. Emphasizing these additional reasons would further strengthen the proposal.

- Noting that the University of California, Irvine (UCI) and the University of California, San Diego (UCSD) established their medical schools reasonably soon after the inauguration of their general campuses does not strike us as a compelling argument for UCM to use in defending its readiness to do the same. The present circumstances are substantially different from those extant when UCI and UCSD medical schools were established. For example, both UCI and UCSD were located in areas with already large and still growing populations; UCI acquired an existing fully operating medical school;

UCSD inherited the Scripps Institute of Oceanography, a world-renowned scientific center, and was able to acquire the San Diego County Hospital for its clinical program. Moreover, although the current call for increasing medical school enrollment nationally may echo that earlier era, the financial conditions of both state and federal governments (e.g., a flat NIH budget) at present are anything but propitious.

- More detail clearly will be required on the precise roles envisioned for UCD and/or UCSF Fresno during the initial phase of development toward a UCM medical school.

- The curriculum outlined for years 1 and 2 of the undergraduate medical program (M1 and M2) reflect fairly conventional thinking. We are aware that plans are in the works to develop a truly innovative educational program that, in addition, is likely to be framed around regional/global health needs. We believe that an educational program of this nature would greatly strengthen the proposal for a medical school at UCM. Adequate resources will have to be allocated for curriculum development, however, if the full potential for creating a unique educational program is to be realized. We are also aware that some consideration has been given to the possibility of creating a bi-nation program (e.g., with a school in Mexico). Further exploration of this possibility seems warranted.

- The plans outlined in the preliminary proposal for the use of information technology lack sufficient detail and appear to reflect the still nascent informatics infrastructure on the campus. More explicit information would be helpful regarding how IT will be used to deliver the curriculum, to monitor uniformity of student experiences across the distributed curriculum, to assess student performance, to buttress the medical research mission, and to support the patient care activities of fulltime and affiliated clinical faculty. In addition, some detail should be provided regarding how the growing telemedicine capability in the Valley (especially the innovative programs being developed by UCD) will be utilized to advantage.

- The research plan outlined in the preliminary proposal also lacks requisite detail. We are aware that efforts are underway to identify the research opportunities that could emerge in the context of a UCM medical school. Those efforts will need to examine how the specific research opportunities relate to the overall strategic goals of the university and, in particular, to the health needs of the Valley.

- Several of the revenue-related estimates included in the preliminary proposal appear to us to be overly optimistic and should be revised (e.g., revenue generation per clinical faculty, revenue from grants and contracts, percentage of time clinical faculty can spend on academic missions).

- The final proposal will, of course, have to specify the criteria and the process to be used in selecting which of the clinical facilities listed in the preliminary proposal as potential partners will serve as principal affiliates for implementing the academic program.

- The fundraising plans will, likewise, need a good deal more specificity than is outlined. The recommendations for building a development program that were submitted to UCM

by John Cash, Ph.D. of the firm Marts and Lundy ("Capitalizing on a Singular Opportunity: A Plan for Fundraising at the University of California, Merced, September 2008") are basically sound. The potential appears to exist for mounting a sustained private fundraising effort in support of a new UCM medical school. However, the amount of money estimated to be available through philanthropy for this purpose seems overstated, especially for a new campus with limited experience in fundraising. Conversely, in our opinion, the amounts suggested as needed to support the campus development office and related infrastructure, while significant, are not overstated given the challenge of fund-raising in the present economic climate.

- Based on our review of the existing residency programs in the hospitals we visited, the preliminary projections for growth of graduate medical education (GME) appear overly ambitious. Note might be taken, in addition to growth in numbers of residents, to the need for programs of exceptional educational quality, as well

- Perhaps most important, the timeline envisioned for the full development of an independent UCM medical school appears to us to be unrealistic, given the need to obtain significant financial support both from the State of California and the federal government, as well as from private benefactors at a time of extraordinary fiscal constraints.

B. Recommendations for Planning Process

As suggested above, a great deal of additional information and planning will be needed to answer unresolved questions and move the UCM proposal through the complicated UC System approval process. Our recommendations for this process are as follows:

- The Planning Timeline: UCM should remain strongly committed to establishing a new school of medicine but the timeline for planning should be extended. Postponing the request to establish an independent new school, rather than working a hardship, would give UCM the time both to develop a truly compelling and innovative proposal and to gain much useful experience in medical education by functioning for a period of time as a "branch campus" of an existing UC school (see below).

  The financial circumstances in the State of California and the nation have deteriorated significantly since the Regents gave their approval to continue the planning effort. In our view, submitting a request for Regental approval of an independent UCM medical school before the requisite financial resources are more likely to be forthcoming would be doomed to failure. It is clear from our discussions with key members of UCOP staff that the continuing decline in available resources has reduced the level of support at UCOP for a Merced medical school on anything like the timeline suggested in the Preliminary Program Proposal and Business Plan submitted the Regents in September 2007. The worsening financial condition has also intensified the concerns of the other University of California campuses (as reported to us by the chancellors with whom we spoke) because of their belief that that the development of another medical school at this time would lead

to reduced support for the existing medical schools and other academic programs on their campuses.

Current fiscal realities have, in all likelihood, also dampened the enthusiasm of the UCM faculty for proceeding quickly to establish a medical school. Support by the campus faculty is understandably conditioned on the new school having a positive impact on the development of this young university. To the extent that adequate incremental resources are deemed problematic, faculty will naturally be concerned that existing commitments and other campus priorities will be jeopardized by the resource requirements of a new medical school. The planning process must deal fully and explicitly with these fiscal realities and with attendant concerns about the feasibility in the near term of creating a wholly independent new medical school.

For all of these reasons, we recommend that the next submittal to the Regents be postponed for at least one year. As detailed below, we suggest a target date of 2012 for recruiting an inaugural class for the proposed "branch campus" and a target date of **no later than 2020** for launching a completely independent medical school. Receiving Regental approval to establish a new school, and having functioned successfully for several years as a "branch campus" of an established medical school (e.g., UCD), UCM would be in an excellent position to quickly obtain preliminary LCME accreditation (see below), which would permit immediate recruitment of the inaugural UCM medical school class. This modified timeline would also provide an opportunity for the campus to plan and implement the pre-baccalaureate curriculum discussed below.

- Planning Structure: The planning process should be more structured, inclusive and transparent than it has been to date. Given the limited faculty resources available on the new campus, the planning process has understandably relied heavily on UCM administrators and a handful of faculty. An additional benefit of extending the timeline as suggested is the opportunity to recruit additional lead faculty with the relevant expertise and experience needed to staff a successful planning process.

  We recommend that UCM take a careful look at the planning process undertaken by UCR in constructing its successful proposal for a new medical school. We note that UCR's process was a good deal more elaborate than what has been contemplated thus far at UCM. This is not to suggest that the situations of the two schools are highly comparable, but merely to underscore the complexity of the issues that must be engaged and resolved. In brief, the UCR process comprised a number of working groups under the direction of an executive committee. The working groups included:

  - Academics
  - Administration, Finance and Student Affairs
  - Capital Planning and Facilities (including IT)
  - Clinical and Clerkships
  - Communication (internal and external)
  - Graduate Medical Education
  - Research Enterprise
  - Business Modeling and Design

In addition, and of importance to the success of the UCR process, the Riverside campus engaged a sizable team of individuals from Deloitte to manage the process. The expense involved was considerable, and may be out of reach of UCM's planning budget. But UCR's experience illustrates the need for a robust process of adequate scope to manage the planning effort.

- Planning Personnel: As noted above, as a young school, UCM has a relatively small number of faculty members with training and experience in many areas critical to the medical school planning process. Therefore, staffing the planning groups will require enlisting faculty members from other campuses (e.g., UC Davis, UC Berkeley, UC San Francisco), as well as practitioners and administrators from those regional institutions that are to become the principal partners for the clinical education and the research programs of the UCM medical school. Including individuals from potential affiliate institutions has the added advantage of building good will and commitment among individuals on whom the school will depend for its success.

- Planning Leadership: Dean Pallavicini has done a superb job of leading the development of the medical school planning efforts to date, even while continuing to serve as fulltime Dean of the School of Natural Sciences. We recommend that she continue to play a key role as chair of an Advisory Committee for Medical School Planning, the membership of which should comprise faculty and administrative leaders from the campus and, as noted above, representatives of potential regional partners. Immediate oversight of the planning process should continue to be vested in Dr. Frederick Meyers, Chair of Medicine at UCD, who has been named Executive Director for Medical School Curriculum Development and Academic Planning. Appendix E contains draft job description for this position. If the decision is taken to stage the development of the new UCM medical school, as we recommend, the planning process may be somewhat less intense over the near term than originally envisioned. It seems clear that Dr. Meyers is well positioned to be of great assistance during this phase of the planning effort and may well emerge as the principal architect of the ultimate medical school proposal.

III. RECOMMENDATIONS FOR A UCM SCHOOL OF MEDICINE

A. Mission and Vision

UCM has the unique opportunity to conceptualize and plan "from scratch" a medical school prospectively to meet the specific needs of an underserved region. Such "green field" opportunities come along rarely and justify the articulation of compelling mission and vision statements. The vision statement included in the PowerPoint presentation to the UC Regents in May 2008 captures the campus's aspiration admirably, as follows:

"The Vision of UC Merced Medical School is to –

- Be **UC quality**
- **Educate and retain** diverse, multi-culturally competent physicians that reflect the face of California and the Valley
- Provide **signature research programs in population health the leverage** the campus inter-disciplinary environment
- Address **health care needs of the Valley**
- **Lead and implement 21st century medical education**
- Be an **economic engine**
- Demonstrate to *Valley elected officials and community leaders* that **UC is committed** to the fastest growing region in the state"

As a point of departure for further discussion, we offer the following draft mission and vision statements for your consideration:

Mission (draft): To establish a medical school devoted to addressing the health needs of the San Joaquin Valley by educating a diverse group of future physicians for the region, by advancing the understanding of diseases afflicting the population, and by providing high quality primary and specialty medical services to residents of the area. And, in recognition of the universality of medicine and the medical sciences, to prepare a future generation of physicians and scientists to become leaders in the global conquest of disease.

Vision (draft): Following the phased development of its medical school, the University of California-Merced will be the principal engine for improving the health and economic well-being of the San Joaquin Valley. Having launched an innovative educational program embodying the University of California's highest standards, UC Merced will be a magnet for attracting a diverse group of exceptional students who seek careers in the health sciences. With its exemplary interdisciplinary programs in basic and applied research, UC Merced will generate and share the new knowledge critical to solving the most vexing public health problems affecting residents of the Valley and beyond. Over time, a substantial fraction of physicians providing care to residents of the San Joaquin Valley will be proud graduates of the UC Merced medical school and will maintain lifelong competency through the continuing medical education programs sponsored by the school. UC Merced faculty will be sought out by physicians throughout the region for consultative help in caring for their most seriously ill patients. As the youngest medical school in the University of California system, UC Merced will be renowned both for the rapid development of its novel educational, research and clinical programs and for the vital contributions these programs are making to the health of the regional, national and global communities.

B. Medical Education

We strongly recommend that UCM seize its unique "green field" opportunity to craft a truly innovative program of medical education. There is a general consensus among academic leaders that medical education has not kept pace with the growing public expectations of physicians or with the novel demands of an increasingly complex healthcare system. Existing medical schools, burdened by longstanding and deeply rooted patterns of education, are hampered in their ability to make substantive improvements in their programs. Being in a position to plan its curriculum from a "blank slate" offers UCM an unprecedented chance to establish itself as a leader in innovative approaches to the preparation of tomorrow's doctors.

We understand that Dr. Meyers has begun discussions with Drs. Michael Whitcomb and David Irby about the curriculum for the UCM medical school. Both of these individuals have extensive experience with medical school curricula and have written extensively about the need for substantial revisions of both the content and processes of medical education. Hence, we urge UCM to continue involving them in the curriculum planning process.

As a backdrop to this planning effort, we would make the following observations:

- Pre-clinical education: Accredited programs in medical education comprise two major components, pre-clinical (commonly referred to as the "basic sciences") and clinical. Although there is an increasingly strong movement in US medical education to interweave these two components during the 4-year curriculum, it is convenient for the present purpose to consider them separately because they offer distinct challenges and opportunities.

  Certain subject areas are foundational to medicine and are indispensable components of the education of all physicians. Examples include gross and microscopic anatomy, biochemistry, physiology, molecular biology, genetics, and microbiology. Many questions persist within medical education circles regarding how students can best achieve the requisite learning objectives within each of the foundational components. Following are some of the questions that UCM will need to answer in constructing its pre-clinical curriculum:

  - Which, if any of these topics should some or all students be expected to encounter (and to what depth) during the pre-baccalaureate period of their education?
  - Should students who demonstrate requisite understanding be accorded advanced placement?
  - Should these subjects be presented as distinct disciplines? If so, in what order? Or, should the relevant material be presented in interdisciplinary courses?
  - What, if any, basic science material should be included in the "clinical" phase of the medical school program?
  - What level of competency should a student attain to qualify for the MD degree?
  - Given the ready availability of sophisticated, up-to-date, web-based educational resources and assessment tools, to what degree should students be permitted to

pursue some or all of these topics on their own, guided by faculty-designated learning objectives?

- What "foundational" subject matter beyond the traditional basic sciences should be included in the pre-clinical curriculum? Examples to consider include:
    - professionalism
    - systems thinking
    - organizational behavior and development
    - quality improvement methods
    - medical informatics
    - health economics
    - population health
    - global health

- Clinical education: Given the nature of the community in the immediate vicinity of UCM, coupled with the current economic situation, no realistic possibility exists for the university to construct or acquire a hospital facility or to identify one nearby to serve as the focal point for the clinical aspects of the medical education program. This reality is best regarded not as a disadvantage but as an opportunity for UCM to develop from the outset innovative and region-specific solutions to providing its students with the appropriate variety of clinical experiences needed over the four years of the medical school curriculum.

  The clinical phase of medical education is arguably the most problematic for existing medical schools because of their limited access to a sufficiently wide variety of patients. Over the past several decades, medical schools have become heavily dependent on teaching hospitals as the venue for the clinical education of medical students. As the patients admitted to these institutions have become less and less representative of the range of illnesses encountered by the general population, medical students have had less and less opportunity to gain adequate clinical experiences prior to entering residency training. To compensate for this shortcoming, medical schools have sought affiliations with community hospitals and other less intensive settings than those found in the typical academic medical center. As a consequence, virtually without exception, medical schools have adopted some form of "distributive" clinical education.

  The extent to which schools have done so is quite variable. Some with longstanding relationships with major academic medical centers have augmented their clinical education resources by acquiring or networking with one or more nearby community hospitals. Conversely, many of the schools established in the last wave of enrollment expansion in the 1970s were designed explicitly as "community-based" medical schools and implemented a distributive education model at their inception. Still other schools have established regional branch campuses (often at great distances from the parent university) to enable a subset of students to receive their clinical education in a more "real world" setting than that available at the "home plate" medical center. In each of these variations, the quality of the educational experiences, as measured by student performance, is indistinguishable, if not superior, to that of the "classical" model of clinical education.

While these examples validate the effectiveness of the distributive model of clinical education, none offers a precise template for adoption by UCM. The unique circumstances extant throughout the Central Valley offer UCM an opportunity to create a variation on the distributive model tailored specifically to the capabilities and needs of the region. Moreover, needing to craft relationships with clinical facilities in the region offers UCM the chance to begin to influence directly the standard of care for Valley residents.

- Information technology (IT): The recent and continuing development of powerful communication and information technologies holds major promise for revolutionizing medical education. By substantially augmenting traditional pedagogical methods, IT has the potential to greatly enhance the effectiveness and efficiency of medical education. Indeed, educators are just beginning to glimpse the positive transformations that IT-enabled learning will make possible. UCM is in an enviable position to build these new pedagogical approaches into its medical education program from inception. Not only would doing so propel UCM to the front ranks of medical education innovators, it would also constitute a strong attraction to potential faculty and students.

- Faculty Development: One of the most common and valid criticisms of today's medical education is the lack of attention typically paid to the need for explicit faculty development activities. UCM could earn considerable national commendation by establishing a robust program in faculty development. Moreover, the successful implementation of the proposed innovative curriculum is arguably dependent on such a program. In order to reap the potential benefits from the proposed innovations, both novice and experienced faculty will need formal instruction in modern concepts of adult learning, in contemporary pedagogy, and in effective role modeling.

- Accreditation: It is critical for UCM to contact the Liaison Committee on Medical Education (LCME) early in the planning process so that the progress toward full accreditation is as smooth as possible. For this purpose, it is immaterial that the timeline for making formal application for accreditation remains uncertain.

  The LCME is jointly sponsored by the Association of American Medical Colleges (AAMC) and the Council on Medical Education of the American Medical Association (AMA). The following statement from its website (www.lcme.org) underscores its significance:

  > Accreditation signifies that national standards for structure, function, and performance are met by a medical school's education program leading to the M.D. degree. LCME accreditation is required for schools to receive federal grants for medical education and to participate in federal loan programs. Students and graduates of LCME-accredited medical schools are eligible to take the United States Medical Licensing Examination (USMLE). These graduates also have eligibility to enter residencies approved by the Accreditation Council for Graduate Medical Education (ACGME). Graduating from

> an LCME-accredited U.S. school and passing the national licensing examinations are accepted as prerequisites for medical licensure in most states.

The guidelines for new medical schools also are detailed on the LCME website, "LCME Guidelines for New and Developing Medical Schools," (http://www.lcme.org/newschoolguide.pdf) with additional details in its "Rules of Procedure" (http://www.lcme.org/rulesofprocedure.htm) where the following instructions call for particular attention:

> New medical education programs leading to the M.D. degree undergo a three-stage, transitional accreditation process prior to achieving full accreditation status. This process is available only for new programs that have not admitted or enrolled any students. Developing programs that have already enrolled students without holding preliminary or provisional accreditation are not eligible for LCME consideration until the educational program is complete (i.e., at least one class of students has graduated). At that time they may apply for full accreditation, with the understanding that if and when full accreditation is granted it will take effect with the next entering class after the decision to grant full accreditation was made. Branch campuses of existing medical schools which intend to begin offering a complete and independent medical education program must initiate the process for new programs prior to admitting any students to the new program.

While the last sentence in the paragraph above may not apply to the sequence planned for the UCM school of medicine, if initial classes are located at UCD, the following paragraph from the LCME Accreditation Guidelines for New and Developing Medical Schools mandates early contact and discussion with the LCME:

> MINIMUM REQUIRMENTS FOR CONSIDERATION BY THE LCME
> Any new medical education program seeking LCME accreditation must follow a series of steps outlined in the LCME policy document *Rules of Procedure*. Briefly, if the LCME deems a school ready to admit a charter class it will grant preliminary accreditation to the educational program. The program is then reconsidered as it develops and additional resources are put into place. If all goes well the program will undergo a full survey early in the fourth year of the charter class's progression; if the self-study and corresponding documentation indicate to the LCME's satisfaction that the program meets all accreditation standards, the program will be granted full accreditation…
>
> **NOTE: If a medical school chooses to admit a charter class prior to receiving preliminary accreditation from the LCME, it will not**

be eligible for LCME consideration until after the charter class graduates.

C. Health Sciences Research

Excellent progress has been made to date in developing a campus-wide plan for health sciences research. Dr. Frederick Meyers has worked with interested UCM faculty to formulate a series of "consensus statements" that articulate a sound approach for integrating the research envisioned for the proposed medical school with the strategic goals of the university as a whole. The prospects appear excellent for mounting a successful health sciences research portfolio for the campus and we strongly encourage continuation of this planning effort.

We would emphasize, in this connection, that a strong research program, while an essential component of a premier medical school, need not be extensive at the very inception of a new school. Virtually none of the country's existing research-intensive medical schools began with a comprehensive, in-depth research program. Indeed, in almost every case, the research enterprise currently in place at those schools required decades to assemble. LCME standards, which serve to define the essential features of a medical school, do not stipulate how much or what kind of research is needed for an institution to be accredited. LCME standards do include the following injunctions:

> "The program of medical education leading to the M.D. degree must be conducted in an environment that fosters the intellectual challenge and spirit of inquiry appropriate to a community of scholars."
>
> "Medical schools should make available sufficient opportunities for medical students to participate in research and other scholarly activities of the faculty, and encourage and support student participation."
>
> "Faculty members should have a commitment to continuing scholarly productivity characteristic of an institution of higher learning."

As in the case for medical education, UCM has the great advantage of a virtual "blank slate" for developing its health sciences research program. UCM should seize this unusual opportunity to dedicate a substantial portion of its current and future research enterprise to addressing the health needs of the San Joaquin Valley. Doing so would not only fulfill its mission to advance regional interests but would also position UCM to play a key role in the proposed University of California School of Global Health. As a microcosm of unmet health needs world wide, the Valley is a natural "laboratory" for examining critical questions on the global health agenda.

D. Staged Approach to the Development of a Medical School

We strongly recommend that UCM adopt a staged approach to the development of a fully independent medical school. In view of the fiscal constraints under which the University of California is presently operating (as noted above), and of the uncertainty about when those constraints will be loosened, it is difficult at present to set a firm date for completion of the

medical school project. Ongoing adjustments in whatever timeline is proposed will likely be required in order to maintain a proper balance between the resources needed to continue the development of the main UCM campus and those needed to mount a UC-quality medical school.

Fortunately, the genuine willingness of both UCD and UCSF Fresno to assist UCM in developing a program in medical education can be mobilized, as detailed below, to enable an orderly progression toward the ultimate goal of a world-class medical school under the banner of UCM. Indeed, that is the goal agreed upon by everyone with whom we spoke; not "if" a medical school at UCM, but merely "when."

Stage 1

As a first step, which might be taken in the very near term, we propose that UCM develop a unique undergraduate program in what might be called a Biomedical Education Track. We envision that admission requirements for this program would exceed those for admission to UCM *per se* and that special consideration would be given to students from the Valley who come from less advantaged and more culturally diverse backgrounds. The program would lead to a BS degree and, in addition to the traditional pre-med requirements, would emphasize the "Valley Health Agenda." Special courses, seminars, and targeted activities would focus on the health needs of the region and on career opportunities in the health professions.

To the extent possible, teaching staff for this program would be drawn from UCM's existing faculty in biomedical and related fields and from the faculty newly recruited in anticipation of launching the next stage of program in medical education (see below). To supplement UCM faculty during the interim, "ramp-up" phase, individuals from UCD and UCSF Fresno (and elsewhere in the UC system, as necessary) would be called upon.

Perhaps as many as 100-200 students might be admitted annually to this program. All who complete the program requirements successfully would, of course, be awarded the BS degree; those who excelled in the program (in addition to meeting other admission requirements) would be offered preferred admission to the UCM program in medical education (see below). Successful graduates of this program would likely be competitive candidates for admission to other medical schools within the UC system or elsewhere, as well as to other health professions schools. The expectation would be that a number of students admitted to this program would, at the completion of their advanced degrees, elect to settle in the Valley and contribute to meeting the health needs of the region. To encourage students from the Valley eventually to pursue this career path (and to apply to the undergraduate program in the first place), consideration should be given to offering tuition remission and/or loan forgiveness in return for a multi-year commitment to return and serve residents of the region

Among the advantages we envision for starting with a program like this are the following:

- Establishing an undergraduate track in anticipation of, and articulated with, a UCM program in medical education would allow UCM to begin its efforts in this area in a substantive and visible way within the very near term.

- The availability of this track would likely appeal to highly qualified high school students and would contribute measurably to increasing the undergraduate enrollment of such students.
- This track would serve to prepare students for advanced study in all the health professions, not just medicine.
- Having an undergraduate track with a defined focus on health sciences would facilitate recruitment of the additional faculty in the disciplines necessary to staff the M1 and M2 years of the medical school curriculum.
- With only modest additional faculty resources, this track could be a platform for inaugurating a "post-bac" program for graduates of UCM and elsewhere who require additional course work in preparation for application to medical school.

Stage 2

As a stepping-stone to the full implementation of an independently accredited medical school, we recommend that UCM begin by establishing a "branch campus" of the UCD medical school. Much of the preliminary planning that has already taken place is immediately applicable to implementing such an arrangement. Thus, it should be possible to target an opening date for a UCM branch campus of UCD as early as 2012.

Under the envisioned arrangement, a separate cohort of students (perhaps 18 to 24 to start) would be admitted to the UCM branch program; UCD and UCM faculty would make admission decisions jointly. Special consideration could (and should) be given to Valley residents from less advantaged and more culturally diverse backgrounds (as also recommended for applicants to the pre-baccalaureate program) and to those who evince a genuine interest in returning to the region to pursue their careers once completing training.

Students admitted to the branch campus program would pursue a traditional medical school program of study augmented with educational experiences targeted at the Valley Agenda. The University of California's PRIME program could be used as a template for this program. In this regard, consideration should also be given to structuring a five-year program and offering a combined MS/MD at program completion. Doing so would permit in-depth study of several topics relevant to the health needs of the Valley but not traditionally included in the standard medical school curriculum. Ideally, students completing the undergraduate program described under Stage 1 above would be prime candidates for admission to the UCM branch campus. The number of students admitted to the branch campus could increase progressively as the developing UCM faculty resources and facilities permitted.

At the inception of this stage, depending on available funding for UCM faculty recruitment, much of the M1 and M2 curriculum might of necessity be taught by UCD faculty (either in Sacramento or in Merced); as additional faculty were recruited to UCM, more and more of the teaching responsibility for the pre-clinical curriculum would be assumed by Merced-based individuals. The availability of sophisticated information and communication technologies

should make it possible to maintain a coherent educational experience for the UCM cohort of medical students and will offer UCM curriculum planners an opportunity to develop and introduce innovative pedagogical methods, as discussed above. As the branch campus develops and expands its student enrollment, the UCM-specific curriculum will take shape (see below) and will be ready for transitioning seamlessly to the full implementation of the UCM medical school in Stage 3.

During the branch campus phase of development, several options exist for meeting the clinical education needs of the UCM cohort of medical students. One attractive option would be to engage the facilities and staff of Kaiser/Permanente in Stockton. Our visit to that facility indicated a strong desire on the part of its leadership to partner with the UCM medical education program. Moreover, having students acquire their early clinical experience in the model of health care delivery exemplified by Kaiser/Permanente could be particularly beneficial. Given that the US healthcare system is likely to (and should) evolve toward a more integrated organizational model, students whose formative experiences with Kaiser-like organizations are likely to be better prepared to participate in and lead needed healthcare reforms.

An alternative option would be to join forces with UCSF Fresno and incorporate the UCM cohort of students into the existing clinical education program at that site. Yet another, non-exclusive option would be to begin to develop relationships with other Valley healthcare providers in anticipation of the distributed model of clinical education envisioned for the fully developed UCM medical school. Finally, some combination of these alternatives may prove most desirable. Given that the need to specify the clinical curriculum remains several years off, ample time is available for the UCM curriculum planners to explore the various possibilities in an effort to construct the optimal arrangements.

Among the advantages we envision for implementing this interim stage on the way to full medical school status are the following:

- Initiating the effort under the UCD umbrella obviates the need for UCM to acquire independent LCME accreditation before launching a substantive, visible program in medical education. LCME would need to grant UCD approval to create a branch campus and, in the process, useful lines of communication between UCM and the accrediting body would be established.

- Utilizing the resources already available at UCD (and possibly other UC campuses) allows for a smooth phase-in period as faculty and other resources are assembled over time on the UCM campus

- Beginning with a relatively small cohort of students will facilitate experimentation with innovative curricular content and pedagogical methods before having to “scale up” to meet the needs of a larger class

- Recognizing the obstacles to obtaining in the near term the necessary approvals for an independent medical school at UCM, demonstrating success with a “branch campus” of UCD over an interim period should increase the likelihood of receiving the go ahead from the UC Regents when the time is more propitious.

Stage 3

The final stage in this process is, of course, the establishment of a fully independent, LCME accredited medical school at UCM. For planning purposes, we would recommend targeting a time certain for accomplishing this goal, with the full understanding that circumstances well beyond the control of the campus will ultimately be decisive in this regard. We would suggest 2020 as the **latest target date** for transitioning from Stage 2 to full implementation. By that time, the number of students matriculated to the UCM branch campus under the umbrella of UCD should be equivalent, or nearly so, to the number of students projected for the independent medical school. Moreover, by that time, UCM should have recruited the full complement of faculty needed to deliver the UCM-specific M1 and M2 curriculum and will have determined the nature and venues for the distributed model of clinical education for M3 and M4.

A key decision will have to be taken relatively early in Stage 2 in order to pave the way for a smooth transition to Stage 3; that decision has to do with the geographic "center of gravity" for the medical school. In particular, a location will have to be selected as the site for the construction of a medical education building. That site will likely serve as the physical focal point for the school. At this time, two options seem plausible to us; one is Merced and the other is Fresno.

The advantage of Merced as the principal geographic locus for the medical school is obvious: the propinquity with the other faculty members on the campus, many of whom will desire close relationships with the medical school faculty and their research programs. In addition, having all of UCM's programs on one campus would enhance the image of the university as a coherent entity, would minimize travel time for faculty with both undergraduate and medical school teaching responsibilities, and would avoid duplication of certain administrative services.

The advantage of Fresno as the principal geographic locus for the medical school is equally obvious: the existence of the well-established and successful program in medical education at UCSF Fresno. Transferring the affiliation of the Fresno campus from UCSF to UCM would provide a "ready made" solution to one of the most vexing challenges that must be overcome, namely, identifying a suitable partner with which to develop a UC-quality clinical educational program. As noted below, our review of the potential sites in the Valley that might function as a principal clinical affiliate of UCM identified the Community Regional Medical Center in Fresno as far and away the most promising. Indeed, none of the other sites we visited seemed capable of satisfying this need, even were they to make substantial investments in facilities and staff (which is highly unlikely). While Kaiser-Permanente voiced sincere interest in academic involvement, their potential role, while it could be substantial, would likely remain secondary to that of UCSF Fresno, and also more likely to focus on graduate medical education.

Assuming that a re-direction of the Fresno program from UCSF to UCM were deemed desirable (as we believe is the case), serious consideration should be given to envisioning the fully developed UCM medical school at that location. Note that two existing medical schools are located at some distance from their parent universities, Weill Medical College (located in New

York City) of Cornell University (located in Ithaca, NY) and the Pennsylvania State University (located in University Park, PA) College of Medicine (located in Hershey, PA).

E. Clinical Placement

1. Clinical Placement of Medical Students

Assuming UCM adopts the recommended phased approach to the development of its medical school, students will be located primarily at UCD (at least initially) for the first two years (M1 and M2) of the program, and nearby clinical facilities will be utilized for student-patient and student-clinician contact. In the first year, the curriculum might include assigning each student to a clinician advisor who could introduce the student to patients with illustrative medical problems. Through periodic contacts with a select group of patients over that year (i.e., at clinic, hospital and home), the student would encounter many aspects of clinical medicine, including (a) the impact and meaning of illness to patient and family, (b) the doctor-patient relationship, and (c) the physician's interpretation and handling of the individual patients' medical, social and other concerns.

In M2, the student learns how to take the medical history and perform the physical examination. Students would have additional early clinical contacts through occasional presentations of a patient at "clinical rounds," with demonstrations of pertinent history and findings along with explanations and perspective on the illness and its various ramifications. All of these early encounters call for student access to clinics/hospitals where willing patients and competent faculty members who are committed to teaching can be found.

It is important to emphasize that students during the M2 year do not march through the curriculum en masse, especially for their clinical exercises. Rather, they are often assigned in small groups to various locations for relevant experiences. And when the site for M1 and M2 education moves away from UCD, new clinical facilities will have to be identified, and new relationships finalized.

The requirements for education in the clinical setting – access to patients and to committed faculty – only increase as students progress to their third and fourth years (M3 and M4). This is particularly true as student placement at hospitals and clinics becomes multidisciplinary and more focused on the patient as a whole.

A major challenge confronting virtually all medical schools is how to identify the resources needed to finance their clinical education programs. The time required for clinicians to teach comes at the expense of their involvement in patient care, that is, from generating revenue. Even during surgery, the pace of the procedure typically is slowed as the surgeon explains what he/she is doing, or supervises the student (or resident) as he/she performs part of the procedure. As a result, the clinician teacher generates less revenue, raising the question whether the medical school should compensate its clinical faculty for teaching. The answer varies. With a light teaching load, many physicians will be content with the benefits of student contact and the prestige of the academic connection. Others will feel justified in seeking compensation,

particularly those who are asked to devote many hours to teaching and those in the less remunerative specialties.

Where a medical school owns its teaching hospital or has developed a strong affiliation with one or more such institutions, financial support for teaching faculty is derived from multiple sources and is generally centralized. The sources typically include: medical school and hospital operating revenues; endowment income; grant funds; and reimbursement for the clinical services of its physicians. In the academic setting, physician fee income is typically billed by, received by, and distributed through a "practice plan" or "foundation." A portion of this revenue is customarily made available to the dean and/or department chairs for support of teaching and other academic purposes. Any of the sources mentioned above, except those specifically focused (e.g., research grants), can be used for support of teaching; hospitals with a core academic mission characteristically allocate a significant portion of their "bottom line" revenue to support medical student teaching.

In negotiating affiliation agreements with prospective clinical partners, it is imperative to specify funds flow, as well as student placements, student housing and support (if necessary), and the direction, coordination and evaluation of teaching faculty.

2. Graduate Medical Education – Residencies

Almost all of the hospitals, clinics and community health center leaders we visited were supportive of the development of a UCM medical school. Virtually without exception, the rationale for this support related to their specific interest in recruiting and retaining more physicians for the Central Valley. Some viewed the need to be for more primary care physicians; others focused on the dearth of specialty physicians; and most anticipated the possibility of securing more medical staff members for their particular institution. The comment heard more than once was that large numbers of patients from the Valley went elsewhere for specialty care, and even for some forms of primary care. Thus, strengthening the depth and breadth of physician resources locally was a virtually universal hope.

Few institutions had residency programs and fewer still had experience with undergraduate medical education. Our impression was that some institutions with residency programs placed a higher priority on the use of the resident as inexpensive labor than on ensuring that residents received appropriate clinical experience and education. Some institutions were aware of the financial commitments required to support undergraduate and graduate medical education, others less so. All but an important few felt they had little at present to offer in the way of financial support of new medical education programs.

Perhaps in a different geographic area and in a better economic climate an argument for the near-term establishment of additional residency programs would make sense. The advantage of doing so is clear; residents who complete training in a given geographic region are more likely than those from elsewhere to settle in the region to practice. However, given the demographic and economic characteristics of the Central Valley, and the overall state of the economy of California and of the USA at present, we do not recommend that UCM undertake an effort at this time to develop new residency programs. In addition to the unfavorable economic climate, little

readiness or capability exists at most of the institutions we visited to develop residency programs that would attract qualified candidates, particularly candidates whose interests and commitments might lead them to settle in and practice in the Valley. The Kaiser Permanente system is a possible exception to this generalization, and further dialog with that organization would be worth pursuing.

Residency programs are approved by the Accreditation Council for Graduate Medical Education (ACGME), a private organization designed to ensure the quality of some 8400 accredited residency programs in 121 specialty and subspecialty areas of medicine, involving over 100,000 physicians at any one time.[2] Through 27 Residency Review Committees and ACGME Field Staff, programs are approved initially and periodically at intervals of 1 to 5 years, relating to the quality of the specific residency program. Following receipt from the host hospital of a comprehensive self-study document, the Program Information Form (PIF), a visit for program review is carried out by the ACGME Field Staff with, at times, "Specialty Site Visitors" in the medical specialty involved. Interviews are held with program directors, other faculty, administrators, residents (in the already established programs), and other key personnel. The objective information gathered is then reviewed by a specialty-specific Residency Review Committee which renders its approval or not, and may offer corrective recommendations.[3]

Medicare supports only accredited residency programs. That support comes in two formats, Direct Graduate Medical Education Payments (DGME), and Indirect Medical Education Payments (IME). DGME provides partial reimbursement for educational costs – salaries and benefits for residents, compensation to staff physicians for teaching, etc., but only in proportion to the ratio of Medicare beneficiaries to the total inpatient population. IME is a formulaic payment designed to take into account the higher patient care costs due to the existence of teaching programs; it, too, represents only partial support and has decreased over recent years.

Medicare also places limits on the numbers of residents it will consider for support. While the ACGME may entertain a request to increase the number of residents in an established and accredited program (based largely on growth in the number of patients available for teaching), Medicare typically will not. On the other hand, where a specific residency program is about to begin where none in that specialty had existed, Medicare support generally will be forthcoming.

3. Potential Clinical Partners

The requirements of both the ACGME and Medicare (and in some states, Medicaid) are detailed and complex and call for devoted oversight administratively and financially as well as educationally. Of the several clinical facilities that WAG visited, few have the potential to be a principal academic partner where the medical staff as faculty could relate well to the UCM School of Medicine. The first two to consider are Community Regional Medical Center in Fresno (which provides funding for the UCSF Fresno residencies in internal medicine, family practice, emergency medicine, surgery, obstetrics/gynecology and psychiatry) and Children's

[2] See http://www.acgme.org/acWebsite/home/home.asp

[3] Details for individual residencies can be found on the web, for example, in Family Medicine, at http://acgme.org/acWebsite/navPages/nav_120.asp. A useful introduction to residency implementation requirements may be had at the 2009 ACGME Educational Conference, to be held March 5 – 8, 2009 in Grapevine, Texas.

Hospital of Central California in neighboring Madera (which is a major site of the UCSF Fresno related residency in pediatrics). All of these residency programs have academic relationships with the UCSF Fresno program.

Mercy Medical Center in Merced has both the advantage of proximity and a robust family medicine residency (8/year x 3 years). This hospital could be a prime location for medical student education, particularly in years M1 and M2, when/if students in those years are actually located in Merced.

At Doctors Medical Center in Modesto (which is a Tenet-owned hospital), UCD supports a family medicine residency (9/year x 3 years). Without displacing the UCD residency, this institution might also serve as a clinical site for UC Merced medical students.

The Kaiser system, which is expanding from north to south in the Central Valley, offers an interesting opportunity to explore. Judging from the enthusiasm we garnered from Moses Elam, M.D., Physician-in-Chief at the Stockton Kaiser Clinic, and from Bruce Blumberg, M.D., Director of Medical Education, Kaiser Northern California (who drove from Oakland specifically for the meeting with WAG), at least some of the Kaiser units in the Central Valley (existing and to be developed) seem likely to welcome both students and residents. It also appears that Kaiser appreciates the cost of such educational efforts and seems willing to share in their support, probably motivated by their need for new physicians joining the program as Kaiser expands in the region. Overall, Kaiser Northern California hosts about 200 GME positions, funding about half with the balance funded by UCSF.

In French Camp, San Joaquin General hospital is under new management following recent disappointing financial performance. The hospital hosts four residency programs – medicine (7/year x 3 years); family medicine (7/year x 3 years); surgery (2/year x 5 years); and a transitional residency (4/year x 1 year). The hospital also hosts a few medical students from time to time, some from UC Davis and others from osteopathic schools.

Madera Community Hospital sees itself as a potential site for educating students and residents in both family medicine and internal medicine. The hospital does not have an established program in either discipline today, but does appear to have the requisite clinical resources with its 42,000 Emergency Unit visits annually, and clinics in Madera and Chowchilla providing 33,000 and 23,000 annual visits, respectively. In addition, nearby are two overcrowded prisons for women, both built to accommodate 2500 but presently housing about 4000 each, that contribute to the hospital's patient load.

Kern Medical Center in Bakersfield may offer significant opportunity for resident placement and possibly for students, as well. One of the twelve remaining county hospitals in California, Kern Medical Center has 222 beds, 16,000 inpatient discharges annually, 43,000 EU visits and 4,200 deliveries. An affiliation with UCLA has allowed access to academic titles for many of the 90 core medical faculty; a total of 115 FTE faculty receive support for teaching from county and hospital funds. Most of the medical students receiving instruction at Kern Medical Center, however, are from Caribbean medical schools. Residency programs include medicine (8/year x 3 years); surgery (2/year x 5 years); obstetrics/gynecology (3/year x 4 years); transitional (1/year

x 1 year); family medicine (6/year x 3 years); and emergency medicine (8 at entry x 3 years). The local county supervisor spoke with enthusiasm about an academic connection with the UCM medical school (suggesting, in fact, that Kern Medical Center become the primary clinical affiliate). He intimated that significant financial resources as well as strong motivation existed to support an affiliation with UCM. Obviously further and wider discussion would be indicated in response, given the present academic relationship with UCLA. Given that the degree of poverty appears to increase as one moves further south in the Valley, the region served by Kern Medical Center, despite its distance from Merced, could well benefit from both the scholarship and the direct services anticipated as part of the Valley Agenda.

Kaweah Delta Medical Center in Visalia appears to be a strong and well-run hospital that expressed an interest in becoming involved in medical education. Like virtually all other institutions we visited, a major basis for such interest is the anticipated resulting opportunity to recruit staff physicians. But like many we visited and do not discuss further in this report, their ability to meet either programmatic or financial standards for clinical education efforts is not assured. Nevertheless, the ability of this institution to host residents deserves further exploration.

In summary, UCM needs to determine through further discussion which institutions will become the first tier of clinical resources for the proposed medical school, considering the differing needs for years M1, M2, M3 and M4. With respect to further planning, these core institutions, once tentatively engaged, must become authentic partners in further planning (as noted above), and sooner rather than later. Otherwise, they will not feel as much a part of the new medical school as ideally desired and their commitment and enthusiasm for cooperating will likely diminish. Our preliminary interviews and discussions were useful in surveying many of the clinical resources but much more discussion back and forth must follow once the basics of appropriate affiliation agreements have been developed, creating a platform for negotiation.

F. Infrastructure

Given uncertainties in the timing of implementation, and the discussions yet to take place concerning the locations of the various activities of the proposed school, it is not possible at this time to develop Gantt or PERT charts that specify the precise phase-in schedule for the various physical facilities that will ultimately be required. In any event, this process will be particularly challenging because students (a) move around to a variety of locations and (b) they do not move *en masse*. However, as planning for the new school continues, consideration should be given to the following:

- Medical School, administrative offices – Dean and staff; department chairs and members (offices and laboratories)

- Teaching facilities, general – auditoria, smaller group meetings; clinical exam rooms for observation and video recording; simulation laboratories; gross anatomy lab (with related cadaver receiving, storage and prep rooms); microscopic labs (direct microscopy and/or computerized microscopy) for histology and microscopic pathology; labs for physiology, pharmacology biochemistry, microbiology, hematology, etc.

- Library/computer/work space access
- Student domiciles, dining, recreation (M1, M2 at least)
- Travel and living considerations for student – patient interactions, M1 through M4
- Research laboratories for medical school basic science faculty; for clinician investigators; facilities for epidemiology, public health studies, etc., related to the Valley Agenda and Global Health focus; combined with the issues of interaction of these faculty members with those of both the rest of the clinical faculty and the balance of the UCM faculty.
- Information and communication technologies

Depending on the specifics of the "distributed model" upon which UCM settles, decisions on infrastructure will vary and, in the example of M1 and M2 initially locating at UCD and later moving to UCM, more than one set of choices will have to be made for much of the above.

We reviewed the 2009 Draft Long Range Plan posted online at http://lrdp.ucmerced.edu/2.asp?uc=1&lvl2=408&contentid=40. This draft does not appear specifically to designate buildings for medical school functions and facilities, although there is consideration of "Health Sciences" structures. Whether these are meant to include the campus physical infrastructure for the proposed medical school is uncertain. If so, without more detail it is not possible to comment on the adequacy of planning or the proposed interrelationships of medical school faculty and students with those of the other parts of the University.

IV. NEXT STEPS

In this report, we have described the work the WAG team has done and the conclusions reached. Our recommendations are intended to serve as guidance to the detailed planning effort that lies ahead. If the recommended staged approach to establishing an independent medical school at UCM is adopted, it will be necessary to identify specific milestones to reach at each stage.

Suggested Milestones

- To inaugurate Stage 1 (an undergraduate Biomedical Education Track), UCM would require only modest additional faculty resources and, as far as we can tell, no additional facilities. One need only develop an appropriate curriculum, which would comprise the standard pre-medical course work, augmented with classroom and field work documenting the history, sociology, demographics, economics, and epidemiology (e.g., disease burden, comparative statistics, available healthcare services) of the San Joaquin Valley. A scholarly thesis describing original student-led research or an in-depth analysis of a relevant topic might be required for completion of the degree. Students might be admitted to this track as early as 2010.
- To inaugurate Stage 2 (a "branch campus" of UCD), UCM would require the following:

- bi-campus agreement regarding the UCM-specific curriculum for the UCM cohort of students (e.g., a PRIME-inspired emphasis on Valley and global health needs)
- detailed understandings regarding the distribution of responsibility for UCM- and UCD-based faculty and staff (e.g., admissions, counseling, financial aid, quality assurance, course direction)
- LCME approval of the detailed plans for establishing a "branch campus" under UCD's accreditation
- adequate faculty resources to teach all of the sciences foundational to medicine, including gross anatomy, microscopic anatomy, biochemistry, genetics, physiology, microbiology and immunology, pathology, pharmacology and therapeutics, and preventive medicine; the required faculty may be either on UCM's fulltime roster or available through arrangement with UCD and other UC campuses
- established arrangements with clinical faculty (fulltime, part-time, or voluntary) and clinical facilities sufficient to deliver the M1 and M2 portions of the medical school curriculum, i.e., to provide instruction in history taking and physical diagnosis and to provide relevant clinical correlations to reinforce basic science concepts
- concrete plans for the further involvement of sufficient clinical faculty and facilities to mount the intense patient-centered instruction needed for the M3 and M4 phases of medical education
- a functioning IT platform to (a) support curricular and pedagogical innovations and (b) monitor and evaluate student performance
- physical facilities at UCM and UCD adequate to accommodate the instructional and support needs of the initial cohort of students (e.g., 16-24) and concrete plans to accommodate a progressive increase in class size (e.g., to 2 or 3 times the inaugural class)
- the availability of adequate financial resources to accomplish all of the above

If these milestones can be met, UCM might admit students to the "branch campus" as early as 2012.

- To inaugurate Stage 3 (fully independent UCM medical school) would, of course, require approval by the UC Regents and subsequent accreditation by the LCME. The timing of a request for Regental approval to proceed to Stage 3 will depend largely on how soon the current financial cloud lifts sufficiently to ease concern about the feasibility of sustaining the proposed school at the requisite level of quality. We recommend that planning for the transition to Stage 3 proceed on the assumption that the inaugural class will be admitted **no later than 2020.** Operating successfully for a number of years as a branch campus of UCD would position UCM to make the transition at an earlier date, indeed, as soon as the financial circumstances in the state permit.

Appendix A

The Washington Advisory Group Team

Jordan J. Cohen, M.D.

Dr. Jordan Cohen is a Director of The Washington Advisory Group, an LECG company, and advises on strategy and management of academic medical centers. Dr. Cohen is the president emeritus of the Association of American Medical Colleges (AAMC) and during his 12 years as president (1994-2006) served as the nation's leading spokesperson for academic medicine. Dr. Cohen expanded and modernized AAMC services for medical students, residents, and constituents; strengthened the association's communications, advocacy, and data gathering, and established new initiatives to improve medical education, research, and patient care.

Prior to leading the AAMC, Dr. Cohen was dean of the medical school and professor of medicine at the State University of New York at Stony Brook, and president of the medical staff at University Hospital; professor and associate chairman of Medicine at the University of Chicago-Pritzker School of Medicine, and physician-in-chief and chairman of the Department of Medicine at the Michael Reese Hospital and Medical Center. He also held medical faculty positions at Harvard, Brown, and Tufts universities and was president of the medical staff at the New England Medical Center Hospital in Boston.

Dr. Cohen is chairman of the Arnold P. Gold Foundation and a director of the Josiah Macy Jr. Foundation of New York, the Foundation for Biomedical Research, Morehouse School of Medicine, National Medical Fellowships, and the Qatar Foundation for Education, Science & Community Development. He has also been a member of the Special Medical Advisory Group of the Department of Veterans Affairs. Dr. Cohen has held many national leadership positions in academic medicine and is a member of the National Academy of Sciences' Institute of Medicine.

Dr. Cohen is a graduate of Yale College and Harvard Medical School and completed his postgraduate training in internal medicine on the Harvard service at the Boston City Hospital. His chief areas of research interest were acid-base metabolism and renal physiology. He is the author of more than 100 articles and is the former editor of Kidney International's Nephrology Forum.

Charles E. Young, Ph.D.

Charles (Chuck) Young is a Director of The Washington Advisory Group, an LECG company, and advises on academic management and program analysis to colleges and universities. Dr. Young is a distinguished leader of American higher education. He served as Chancellor of UCLA and led that institution's progress to its place as one of America's great public research universities. On retirement from UCLA he served first as interim President and then President of the University of Florida and during his four-year tenure helped enhance the University's quality and reputation. Following his second stint as a University CEO he accepted the presidency of the Qatar Foundation for Education, Science and Technology which is responsible for the development of quality scientific and educational development at all levels in the State of Qatar.

A native of California, Dr. Young served in the United States Air Force during the Korean War. Post-military service, he graduated with honors from University of California at Riverside. He completed his master's and doctoral degrees in political science from UCLA. When his mentor, Dr. Franklin Murphy, stepped down as chancellor, Dr. Murphy recommended his protégé to take his place and thus at the age of 36, Chuck Young became the youngest leader piloting any major U.S. university.

During his 29 years as Chancellor of UCLA, Dr. Young made the university a partner with the Los Angeles area, emphasizing and building upon the key position of the university in community development and service. Among his accomplishments, Chancellor Young championed college student involvement in community and public service and was instrumental in efforts to reform K-12 education in Los Angeles.

While at Florida Dr. Young initiated and implemented a Strategic Plan for the University and brought the faculty much more fully into the mainstream of University governance. The latter followed a successful effort to eliminate a long-entrenched faculty union, which made faculty participation in governance problematic.

During Young’s tenure at the Qatar Foundation he focused on bringing the several branch campuses, which had been created through agreements by QF with several major American Universities, into interaction leading to the development of a virtual university of the highest quality.

Dr. Young's responsibilities and accomplishments stretched far. He is a former chairman of the Association of American Universities and has served on numerous commissions including those of the American Council on Education, the National Association of State Universities and Land-Grant Colleges, and the Business-Higher Education Forum. An advocate of internationalism and inclusiveness for universities, Dr. Young has received the Award for Inter-American University Cooperation from the Inter-American Organization for Higher Education, and the International Education Leadership Award from the Coalition for International Education. Other awards and recognition include his election as a Fellow of the American Academy of Arts and Sciences. He has earned the Albert Schweitzer Leadership Award from the Hugh O'Brien Youth Foundation, the designation as a "Treasure of Los Angeles" by the Los Angeles Central City Association, and the Distinguished Service Award for Lifetime Achievement from the American Council on Education.

Dr. Young has been a strong supporter and advisor to the arts, business, education, finance, technology and health care industries. He has been selected to a number of boards of directors for finance, technology and health care industries. These boards include or have included Intel Corp., Nicholas-Applegate Capital Management, the Academy of Television Arts and Sciences Foundation and the Los Angeles World Affairs Council.

Mitchell T. Rabkin, M.D.

Mitchell T. Rabkin, M.D., is a Director of The Washington Advisory Group, an LECG company, and advises on systems issues in health care delivery, and strategy, governance, and management of academic medical enterprises.

Dr. Rabkin led Boston's Beth Israel Hospital for three decades. In 1996, Beth Israel and Deaconess Hospitals merged and formed the nucleus of the second major delivery system in the area, CareGroup. Dr. Rabkin became CEO of this parent corporation until 1998 when, through a long-planned succession, he joined the Carl J. Shapiro Institute for Education and Research at Harvard Medical School and Beth Israel Deaconess Medical Center. The Institute addresses teaching and research in the academic medical center, forging innovative responses to the educational challenges arising out of changes in the conduct of both patient care and research, changes resulting from the burgeoning of relevant information in those fields, advances in technology, and evolving economic pressures.

Dr. Rabkin is Professor of Medicine at Harvard Medical School and has Honorary Doctorate Degrees from Brandeis University, Northeastern University and several other institutions. He is past Chair of the Conference of Boston Teaching Hospitals, and both the Association of American Medical Colleges and its Council of Teaching Hospitals.

A member of the Institute of Medicine, he has been a member of its Advisory Council. He was a member of the Board of Directors of the Duke University Health System and a Vice Chair of the New York University School of Medicine Foundation Board of Trustees. He is a Fellow of the American Academy of Arts and Sciences. In 1999 he was designated a Distinguished Service Member of the Association of American Medical Colleges and also received the Distinguished Service Award of the American Hospital Association.

A graduate of Harvard College and Harvard Medical School, Dr. Rabkin trained in internal medicine at the Massachusetts General Hospital.

Michael E. Whitcomb, M.D.

Michael E. Whitcomb, M.D., received his undergraduate degree from The Ohio State University (1961), his M.D. from the University of Cincinnati (1965), and completed an internal medicine residency and fellowship in pulmonary medicine at Walter Reed General Hospital (1970). He served as chief of the pulmonary disease services at Tripler Army Hospital and Walter Reed General Hospital prior to separating from the Army Medical Corps in 1974 with the rank of Lieutenant Colonel. From 1974 to 1977 he was a member of the pulmonary disease division at Boston University and served as section head at the university hospital. From 1977 to 1982 he served as chief of the pulmonary disease division at The Ohio State University. During that time he also served as associate chair of the department of medicine.

In 1981 Dr. Whitcomb was appointed associate dean for clinical affairs, The Ohio State University College of Medicine, and medical director of the University Hospitals, positions he

held until 1984. During the academic year 1984-85 he was a Robert Wood Johnson Health Policy Fellow of the Institute of Medicine (Congressional Fellowship Program), following which he returned to Ohio State as assistant vice president for health services. He then served as dean of the schools of medicine at the University of Missouri-Columbia (1986-88) and the University of Washington (1988-90). In 1992, he returned to Ohio State as the director of the university's Program in Health Policy and Health Services Research. In 1993, he established the university's Center for Health Policy Studies and was appointed as its first director.

In January 1994 Dr. Whitcomb joined the American Medical Association as the founding director of the division of graduate medical education. On 1 March 1995 he moved to the Association of American Medical Colleges as senior vice president for medical education and director of the division of medical education. In July 2004 he was also appointed as the director of the AAMC Institute for Improving Medical Education. He held both positions until his retirement on 30 June 2006. In November 2001 he was appointed editor-in-chief of *Academic Medicine (*The Journal of the Association of American Medical Colleges*)*, a position he held until 31 December 2007.

Dr. Whitcomb has published over 100 papers covering a wide range of topics (clinical medicine, medical education, and health policy issues), and authored a number of special reports for government agencies and professional organizations. He published more than 70 editorials during his tenure as the editor of *Academic Medicine*. In addition to teaching and conducting scholarly work in clinical medicine, he has held faculty appointments in the health care management departments of two universities and has taught health policy in the graduate programs conducted by those departments. In recent years he has been active in assisting universities involved in establishing new medical schools or new regional campuses.

Miriam M. (Micki) Leder

Micki Leder advises on projects involving academic medical centers, R&D strategy and implementation in both the private and public sectors, and the development and management of research funding programs. She draws on her broad professional expertise, having served as an Associate Dean at the Stanford University School of Medicine, COO and general counsel of a healthcare related REIT, and legal counsel with both government (the National Science Foundation) and private firms. Ms. Leder holds a B.A. in Political Economy from The Johns Hopkins University, and a J.D. from the University of Pennsylvania.

Appendix B

WAG Scope of Work and Work Plan

The Washington Advisory Group (WAG), an LECG company, will support UC Merced in this planning effort through a team of experts led by Jordan J. Cohen, M.D., with Charles E. Young, PhD and Mitchell T. Rabkin, M.D. Michael Whitcomb, M.D., will join the WAG team as a curriculum consultant. Additional team members may be added if appropriate, given the requirements of this engagement. We anticipate that the Washington Advisory Group team will have ongoing and collaborative interactions with UC Merced, providing advice, information and counsel as UC Merced develops its proposal for a new medical school. Specifically, based on our conversations with you and our review of existing planning documents, we propose that The Washington Advisory Group can most effectively assist you as follows:

1. Planning Process

   The Washington Advisory Group will contribute to a structured process for UC Merced's ongoing planning activities, addressing, among other things:

   a. UC Merced personnel needs for the planning effort (e.g., campus coordinator, faculty, staff and leadership), and identification of functional areas to be incorporated into the planning effort

   b. An external "Blue Ribbon" Advisory Committee, including suggestions for membership, and a Community Advisory Committee

   c. A time line for the development and submission of a final proposal to the UCOP and Regents

   d. Coordination of reviews that may be indicated by other entities, such as the Merced Division of the Academic Senate, the University of California Academic Council, the Coordinating Committee on Graduate Affairs, the California Postsecondary Education Commission, Deans of other UC Medical Schools, San Joaquin Valley Medical Education Planning

2. Evaluation and Validation of Preliminary Plans

   A significant amount of thoughtful work already has been done by UC Merced in connection with the preliminary program and business plan for the medical school. The Washington Advisory Group team will continue to review this work, assess the validity of its underlying assumptions, and help to refine the plan. In particular, WAG will:

   a. Help the University articulate the "mission" and "vision" statements for the new school, focusing on the health care needs of the Valley and on the opportunities for innovation in education, research and clinical care

b. Evaluate and elaborate on the pros and cons of establishing a new medical school at UC Merced, and on the merits of various medical school models. This will include an evaluation of:

   i. the unique challenges and opportunities for this medical school, given its location within the State of California

   ii. leveraging campus-wide effectiveness vs. siphoning resources from other UC Merced activities

   iii. the feasibility of alternative models for the medical school ("Fresno-only", "distributed model" and a stand alone medical school and medical center) and the merits of the "distributed" model of medical education in contrast to alternative models

   iv. the issue of maintaining "UC Quality"

3. Education Programs

While UC Merced has laid out its general approach to medical education, it must provide more detail in its final proposal. The Washington Advisory Group will support UC Merced as it develops a more detailed plan in this area by:

a. Proposing concepts and some specifics for curriculum development

   i. M1, M2 – content, innovation, clinical components

   ii. M3, M4 – content, innovation, geographic locations

b. Evaluating potential sites for medical student education, including existing resources, necessary commitments, and assessing the need for further investments

c. Exploring clinical affiliations, including:

   i. Criteria for clinical affiliations

      1. Resource requirements
      2. Academic appointments
      3. Possibilities and practicalities for financial support including practice plan arrangements, possible joint negotiations for reimbursement rates from third-party payers, malpractice insurance opportunities

   ii. Evaluating possible sites for affiliations in terms of utility, feasibility and capability

   iii. Assessing the level of interest on the part of these clinical sites, and identifying resources and support they might be willing to provide

   iv. Identifying issues likely to arise in connection with the negotiation of affiliation agreements

d. Evaluating the initial, transitional role that UC Davis might play
    i. Curriculum design
    ii. Faculty involvement
    iii. Facilities

e. Evaluating the role that UCSF Fresno might play, both initially and possibly over the longer term
    i. Curriculum design
    ii. Faculty involvement, clinical and research
    iii. Facilities
    iv. Potential for transfer of the UCSF Fresno program to UC Merced

f. Evaluating existing Graduate Medical Education programs at UCSF Fresno and elsewhere in the Valley; the potentials for expansion (e.g., ACGME requirements, financing options), and the level of interest these programs have in expansion

g. Discussing the desired phasing of faculty additions in relation to timing of funding, facilities and matriculation

h. Discussing likely capital needs (e.g., space, equipment), both initial and long term

4. The Research Program

In order to help UC Merced further develop its plans for research at the new medical school, The Washington Advisory Group will:

a. Consider how UC Merced might best integrate the existing and planned research programs on its campus

b. Recommend possible areas of research emphasis, including
    i. Basic biomedical research in collaboration with investigators across the university (e.g., stem cell research, environmental studies)
    ii. Applied research (e.g., global health, population studies, prevention)
    iii. Valley-specific foci (e.g., specific illnesses, socio-medical issues)

c. Evaluate roles that might be played by UCSF Fresno research faculty

d. Discuss phasing and nature of research faculty additions

e. Identify likely capital needs (e.g., space, equipment)

5. Funding

   UC Merced's final proposal for a new medical school will include a business plan and financial models. While the plan and financial models will be developed by UC Merced, The Washington Advisory Group will evaluate the assumptions underlying UC Merced's plan and financial models, including those related to:

   a. The magnitude of initial investment, and ongoing operating and capital needs
   b. Multiple funding sources – state, federal and private, and their respective potentials
   c. Potential for philanthropy, local and beyond

Proposed Work Plan

In performing the work described above, The Washington Advisory Group team will review background information provided by UC Merced, and conduct a series of face-to-face meetings. With the knowledge, assent and assistance of UC Merced, meetings will be scheduled with:

a. UC Merced senior management, and faculty;
b. Administrators and selected physician leaders at potential partner sites for clinical affiliations and undergraduate and graduate medical education;
c. The UC President and other appropriate members of UCOP staff;
d. Senior management at UCSF, (both in SF and at the Fresno site);
e. Campus and Medical School leaders at UC Davis;
f. State executive and legislative leaders;
g. Community leaders and potential donors; and
h. Others as directed by UC Merced.

Through discussion with these individuals, team members will gain a better understanding of the current state of the organization, the ideas and concerns of interested parties, and the opportunities and strategic directions that might be pursued.

We anticipate that each team member will make two to three trips to California, spending a total of 8-12 days each in face-to-face meetings with the various participants in this process. Where scheduling precludes face-to-face meetings, team members will conduct telephonic meetings. In many cases, we will have to rely on you to identify some of the individuals with whom we should meet, and also to schedule and arrange the logistics associated with these various meetings.

Once we have completed our review of the background material and completed most if not all of these meetings and interviews, we will prepare an interim report, addressing progress on each of the items described above. Assuming we are able to start work in September 2008, scheduling

some of our key meetings then and in October and early November, we anticipate delivering this interim report to you by Thanksgiving 2008.

The next phase of work will benefit from your feedback of the interim report. It may then involve additional interviews, and a period for analysis and deliberation during which the project team will prepare a draft of the final report, providing our advice and recommendations on all items described above. Assuming we are able to schedule the necessary meetings, we anticipate delivering this draft to you by mid-January, 2009. The project team would then meet with you and other appropriate individuals as you may select, possibly by videoconference, to discuss the draft and your reactions to it. Following this meeting, we will finalize the report.

Appendix C

List of Individuals with Whom WAG Team Met

July 23-25, 2008

S.M. "Steve" Kang, Chancellor
Janet Young, Vice Chancellor and Chief of Staff, UC Merced
Keith E. Alley, Executive Vice Chancellor and Provost
John R. Garamendi, Jr., Vice Chancellor - University elations
Maria G. Pallavicini, Dean - School of Natural Sciences
Samuel J. Traina, Vice Chancellor of Research and Acting Dean of Graduate Studies
Joan Voris, MD, Associate Dean, UCSF Fresno; UC Merced Medical School Steering Committee
Shawn Kantor, Academic Senate, Chair, School of Social Sciences, Humanities and Arts Professor, County Bank Chair in Economics; UC Merced Medical School Steering Committee

Medical School Faculty Advisory Committee
Ariel Escobar, School of Engineering Professor
Andy LiWang, School of Natural Sciences Associate Professor
David Ojcius, School of Natural Sciences Professor
William Shadish, School of Social Sciences, Humanities and Arts Professor
Jian-Qiao Sun, School of Engineering Professor
Jan Wallander – School of Social Sciences, Humanities and Arts Professor

September 16-17, 2008

Robert Tranquada, .D, Professor Emeritus of Medicine and Public Policy, University of Southern California
Cathryn Nation, MD, Associate Vice President Health Sciences, UCOP
Larry Vanderhoef, Chancellor UC Davis
Haile T. Debas, MD, UCSF Global Health Sciences
J. Michael Bishop, MD, Chancellor UCSF
Tim P. White, Chancellor UC Riverside
Marye Anne Fox, Chancellor UCSD
Gene D. Block, Chancellor UCLA
Michael V. Drake, MD, Chancellor UC Irvine

October 20-23, 2008

Steve Kang, Chancellor, UC Merced
Janet Young, Vice Chancellor, UC Merced
John Garamendi, Jr., Vice Chancellor, University Relations, UC Merced
Brandy Nikaido, Director of Regional University Relations, UC Merced
Larry Salinas, Asst Vice Chancellor, Government Relations, UC Merced

Cori Lucero, Director, Federal Government Relations, UC Merced
Heidi Peterson, Community and Local Government Relations Representative, UC Merced
Maria Pallavicini, Vice Provost of Health Sciences, UC Merced
Fred Meyers, MD, Executive Director, Medical Curriculum and Academic Planning, UC Merced
David Ojcius, Vice Provost, Academic Personnel, and Professor (School of Natural Sciences), UC Merced
Ariel Escobar, Professor, School of Engineering, UC Merced
Jan Wallander, Profession, School of Social Sciences, Humanities & Arts, UC Merced
Jian-Qiao Sun, Professor, School of Engineering, UC Merced
William Shadish, Professor, School of Social Sciences, Humanities & Arts, UC Merced
Andy Liwang, Professor, School of Natural Sciences, UC Merced
Martha Conklin, DIVCO, UC Merced
Michael Colvin, DIVCO, UC Merced
Evan Heit, DIVCO, UC Merced

David Dunham, President Mercy Medical Center, Modesto
Rob Streeter, MD, V.P. Medical Affairs, Mercy Medical Center, Modesto

Dennis Litos, CEO, Eric Ramos, MD, CMO, Doctor's Medical Center, Modesto
Peter Broderick, MD, Head of Family Practice Residency Program, Doctor's Medical Center, Modesto

Moses D. Elam, MD, Physician–in-Chief, Kaiser Permanente, Stockton
Bruce Blumberg, MD, Institutional Director of Medical Education, Kaiser Northern California
Terry Lightfoot, Public Affairs

Claire Pomeroy, MD, Dean, School of Medicine, UC David
Thomas Nesbitt, MD, MPH, Executive Associate Dean for Clinical and Administrative Affairs, UC Davis

Dave Culberson, CEO, San Joaquin General Hospital, French Camp
Jerry Royer, MD, Chief Medical Officer, San Joaquin General Hospital, French Camp

Donald Wiley, President, St. Joseph's Medical Center, Stockton
Sandon Saffier, MD, Chief Medical Officer, St. Joseph's Medical Center, Stockton

John Frye, MD, CEO, Madera Community Hospital, Madera
Kanwal Singh, MD, Medical Staff President, Madera Community Hospital, Madera

Jim McCarty, MD, Vice President and Chief Medical Officer, Children's Hospital of Central California, Madera

Robert Dimand, MD, Chief of Pediatrics, Children's Hospital Central California, Madera and Chief of Pediatrics, UCSF Fresno.

Tim Curley, Director of Community Affairs, Children's Hospital

Joan Voris, MD, Associate Dean, UCSF, Fresno
Michael Peterson, MD, Chief, Internal Medicine, UCSF, Fresno
Steve Parks, MD, Chief, Surgery, UCSF, Fresno
Gene Kallsen, MD, Chief, Emergency Medicine, UCSF, Fresno
Ivan Gomez, MD, Program Director, Family & Community Medicine, UCSF, Fresno
Conrad Chao, MD, Chief, Ob/Gyn, UCSF, Fresno
Robert Dimand, MD, Chief, Pediatrics, UCSF, Fresno
Scott Ahles, MD, Chief, Psychiatry, UCSF, Fresno
Paul Goebel, MD, Chief, Department of Medicine and Acting Chief of Staff, VA
Robert Hierholzer, MD, Chief of Mental Health and ACOS Education, VA
Ken Ellzey, MD, Representative from Physician in Chief, Kaiser Permanent
Adriana Padilla, MD, Director, Undergraduate Medical Education, UCSF, Fresno
Steve Stoltz, Internal Medicine, UCSF, Fresno
Craig Campbell, Program Director, Psychiatry, UCSF, Fresno
Manon Kwon, MD, Emergency Medicine, UCSF, Fresno

Eugene E. Kercher, MD, Chief Medical Officer, Kern Medical Center, Bakersfield
Jennifer Abraham, MD, President, Medical Staff, Kern Medical Center, Bakersfield
Mr. John Ngoi, Associate Director, Medical Education, Kern Medical Center, Bakersfield
Maureen Martin, MD, Chair, Dept of Surgery, Kern Medical Center, Bakersfield
Michael Rubio, County Supervisor- Fifth District
Navin Amin, MD, Chair, Family Practice Dept, Kern Medical Center, Bakersfield
Paul Hensler, CEO, Kern Medical Center, Bakersfield
Royce Johnson, MD, Chair, Dept of Medicine, Kern Medical Center, Bakersfield
Tai Yoo, MD, Chair, Dept of Psychiatry, Kern Medical Center, Bakersfield

November 10-12, 2008

Mark Garfield, MD, CMO, Kaweah Delta Medical Center, Visalia

Benjamin Flores, CEO, United Health Centers, Parlier

Richard Rawson, MD, CEO & CMO, Adventist Health, Hanford Community Medical Center, Hanford

Dennis Coleman, CEO, Sierra View District Hospital, Porterville
Jasvir Sidhu, MD, Chief of Staff, Sierra View District Hospital, Porterville
Owen Kim, MD, Chair of Continuing Medical Education, Sierra View District Hospital, Porterville
Kathleen Widlund, VP Patient Care Services, Sierra View District Hospital, Porterville

Jack Chubb, CEO, Community Regional Medical Center, Fresno

Jeffrey Collins, CEO, Kaiser Permanente Medical Center, Fresno
Altebar Makian, MD, Physician-in-Chief, Kaiser Permanente Medical Center, Fresno

Dzung Trinh, MD, Kaiser Permanente Medical Center, Fresno
Jack Stobo, MD, Senior Vice President, UCOP
Cathryn Nation, MD, Associate Vice President, UCOP
Robert Grey, Interim Provost, UCOP

November 18, 2008

David M. Irby, Vice Dean for Education, UCSF
Helen Loeser, MD, Associate Dean for Curriculum Affairs, UCSF

Appendix D

Background Material Reviewed

1. Preliminary Program Proposal and Business Plan to Establish a UC Merced School of Medicine issued in September, 2007

2. UC Regents Agenda Item for its May 14, 2008 meeting seeking approval for continued planning for the school of medicine, and associated presentation materials.

3. Marts Lundy Plan for Fundraising at the University of California Merced dated September, 2008.

4. UC Merced Strategic Academic Plan Draft Version 5.0 dated September 15, 2008.

5. A list of all sponsored projects in the Schools of Natural Sciences, Engineering and Social Sciences, Humanities and Arts.

6. UC Merced 2009 Draft Long Range Development Plan

Appendix E

Suggested Job Description:
Executive Director for Medical School Planning

Planning for the proposed medical school at UCM has been delegated to Maria Pallavicini, Ph.D., Dean of Science, and is to involve UCM Faculty, with input from other components of UC, the San Joaquin Valley community and many of its hospitals, physicians and other providers of care. The burden on Dean Pallavicini is particularly heavy, since her many on-going responsibilities remain.

We think it prudent, therefore, that an individual with extensive experience in academic medicine and medical education be identified as soon as possible to assist Dean Pallavicini in leading the planning effort. Such an experienced individual would also help ensure that the proposed new school adheres to the very high academic standards of the University of California. We propose the tentative title, "Executive Director for Medical School Planning" ("Executive Director"), for this individual, to signify that he/she would be functioning in a manner analogous to that of a "Founding Dean-To-Be" for an anticipated but not yet established medical school.

Just as a "Founding Dean-To-Be" would be accountable to the University Chancellor, serving essentially as a chief operating officer reporting to the chief executive officer, the "Executive Director" would be accountable to Dean Pallavicini, who (a) has in-depth knowledge about UC Merced Faculty and resources, the various stakeholders to be considered, and about both community and UC concerns, and (b) has overall responsibility for generating a compelling proposal for the UC Merced medical school, to be presented for approval to the UCOP and the UC Regents.

Under the direction of Dean Pallavicini and with her advice, the "Executive Director" will be responsible for overseeing and coordinating the gathering of information and opinion from all sources appropriate for development of the proposal and for orchestrating the drafting of the final proposal to be submitted. Included in these responsibilities are heading or monitoring and coordinating the various committees appointed to advise the Medical School Steering Committee on curriculum, research, graduate medical education, community service, finance, fund raising, etc., to interact with other components of UC (coordinated with Dean Pallavicini), and to work with community members and groups, health care individuals and groups, keeping them informed and strengthening their commitment to the proposed medical school and its programs. In addition, the "Executive Director" will participate in fund-raising efforts in conjunction with the UCM Development program for the medical school.

Employed by UC Merced, the "Executive Director" will require authority to request and receive relevant information from within UCM and beyond; to set up and coordinate meetings for such purposes; to make site visits, etc. Committed administrative assistance will be required.