

Interprofessional Education at UCSF | 2008

Report on Interprofessional Education at UCSF

**Pietra Adams (School of Pharmacy), Kenny Lim (School of
Dentistry), Hugo Torres (School of Medicine)**

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I. Introduction

Interprofessional Education (IPE), also known as Interdisciplinary Education, is considered by many an important component of health professions' curriculum. It is defined as formal, planned "occasions when two or more professions learn with, from and about each other to improve collaboration and the quality of care¹". This is excluding situations where students simply learn the same content in the same course without interacting to learn with and from each other about each other's roles; this latter case is known as *multidisciplinary* education. Also distinguished from IPE is inter-professional practice, in which providers of different professions work together for the care of a patient, or researchers in different fields collaborate in research. While it serves as a model for students to emulate, inter-professional practice does not teach future health professionals the skills needed to fully collaborate and communicate proficiently. IPE means that students from different fields are interacting and learning in a way that prepares them for the seamless teamwork between different specialists that modern medicine requires.

The goal of IPE is to ensure that students and trainees in the health professions build a skill set that will ultimately increase patient safety, reduce errors, maximize efficiencies, and improve quality of care. It can serve to "modify negative attitudes and perceptions, remedy failures in trust and communication, reinforce collaborative competence, cope with problems that exceed the capacity of any one profession, secure collaboration in policy, create a more flexible workforce, and enhance job satisfaction and ease stress¹".

As a university dedicated to the health professions and comprised of some of the best programs in the country, UCSF possesses great potential for becoming a leader in IPE. UCSF's administration recognizes the importance of strengthening the University's commitment to collaboration and innovation; the first goal highlighted in the Strategic Plan is to "design novel interdisciplinary and interschool approaches in education, research, and discovery". Eventually, UCSF will become "simultaneously innovative, effective and efficient" through interdisciplinary coursework, learning experiences, and teamwork².

UCSF has a number of attributes that would make implementation of strong IPE programs viable. The foremost of these is UCSF's status as a health professions campus; its leadership focuses solely on educating future health professionals and researchers. Therefore, resources and time can be concentrated on IPE from the top down once the need and specific goals are identified. Also bolstering the development of effective IPE activities is the prominence of each UCSF school in its respective field – across the board, UCSF is a research and clinical powerhouse. Students could also learn from each other, as noted below with the peer teaching

between pharmacy students and medical students, or use their own initiative to start programs, as in Students for Interprofessional Learning or Children's Health Hut. The exceptional faculty and students that comprise UCSF will invigorate efforts for collaborative learning.

The objective of this report is to address UCSF's progress toward achieving its goal of innovative and interdisciplinary education. It will discuss current inter-professional activities, as well as opportunities for future expansion of IPE. Furthermore, the report will detail UCSF's institutional barriers that hinder the development of IPE. Lastly, we will summarize the interprofessional activities occurring at other institutions to guide future endeavors here at UCSF. Hopefully these endeavors will lead to further innovation that will maintain UCSF's prominence as a health-professions university.

¹Barr, Hugh. "Today, Yesterday, and Tomorrow: A review". 2004: The Learning and Teaching Network for Health Sciences & Practice and the UK Centre for the Advancement of Interprofessional Education.

²University of California, San Francisco. "Advancing Health Worldwide: A Strategic Plan." 2007.

II. Existing Interprofessional Education, Activities, Events & Opportunities

A. Curricular

- Students from the Graduate Division teach neuroscience to first year dental students on discussion sections. (Spring BMS 118, Mike McMaster)
- 3rd year medical students take intersession course taught by School of Pharmacy student on improving patient outcomes by utilizing pharmacists' expertise.
- Physical Therapy (PT) students teach surface anatomy and musculoskeletal physical exam skills to medical students. The medical students also get to learn about PT's role in patient care.

B. Electives Open to All Students (**See the appendix for further detail*)

- **School of Dentistry**

- BIOMED SCI 186 Adv Head & Neck Anatomy

- BIOMED SCI 187 Lab Instruction in Gross Anatomy

- BIOMED SC 188 Basic Science Curriculum Development

- DPH 186 Interdisciplinary Team Training in Geriatrics

- OMFS 186 Acupuncture for Orofacial Pain

- **School of Medicine**

- Biochemistry**

- 160.01 Food Facts, Fads and Pharmacology

- Clinical Pharmacy**

- 198 BAD BUGS: Interdisciplinary Perspectives on Antimicrobial Resistance

- Epidemiology & Biostatistics**

- 170.16 Environment and Health Hall

- 180.08 Violence Prevention Conference

- 180.10 Introduction to Global Health

- Family & Community Medicine**

- 170.01A Introduction to Developmental Skills Training

- 170.01B Communicating with the Mandarin Speaking

- 170.01E Introduction to Health Policy

- 170.10A Homeless Health Issues

- 171.03 AIDS Forum

- 171.01 The Healer's Art

- 170.01A Prison Healthcare

- 170.01B Issues in LGBTI Health Care

- 170.01E Public Policy Advocacy for Healthcare Professionals

- 170.07 Communicating with the Latino Patient (Intermediate)

- 198 Caring for the Underserved

- 198 Communicating with the Mandarin Speaking Patient 170.01A Integrative Medicine Forum

- 170.01B Communicating with the Cantonese-Speaking Patient

- 170.01C Public Policy Advocacy for Healthcare Professionals

- 170.31C Narrative Medicine: Student as Writer

- Medicine**

- 170.02 Social Activism in Medicine 170.01A Impact of Interpersonal Violence on Health

- 170.01B Bioethics and Society

- 170.30 Older Adults and End of Life Care

- 170.31B Narrative Medicine

Obstetrics & Gynecology

- 170.06 African American Health Disparities
- 170.03 Reproductive Choices
- 170.05 Health Care Issues in the Sex Worker Population
- 170.07 Latina Health Issues Robertson

Pediatrics

- 170.01B Beginning Vietnamese

Inter-disciplinary studies

- 202. Health Policy Research Across Disciplines
- 203. Health Policy Writing Seminar
- 140.03. Global Health Problem Solving and Science

• **School of Nursing**

- B187 Introduction to Statistics
- B192 Introduction to Linear Models
- N203 End of Life Care Across Practice Settings
- N209A Comparative Qualitative Research Design
- N212A Qualitative Data Collection and Ethics
- N212B Quantitative Measurement and Theory
- N230 Measuring Outcomes of Health Care
- N231A Substance Use & Mental Illness
- N232.04A Pediatric Pharmacology
- N240.04 Violence and Health
- N242B HIV Clinical Pharmacology
- N253 Theories of the Policy Process
- N262.05 Primary and Complementary Care Research Utilization
- N273D Environment & Health
- N289.01 Advanced Methods: Meta-Analysis
- N407 Basic Interpretation of Chest X-rays
- S212C Sociological Theory: Symbolic Interaction
- S233 Sociology of Aging
- S235 Tobacco Control Policy Issues
- S236 Race and Class Factors in Health Care Delivery
- S246 Communications & Policy Leadership

S282 Sociology of Science/Technology
S285A Qualitative Methods I
S285B Qualitative Methods II: Analysis
S286 Gender, Sex & Health

- **School of Pharmacy**

CP 151 Pediatric Pharmacology
CP 152.03 Women's Health Issues
CP 152.04 Focus on HIV
CP 170.08 Chemo. & Clinical Oncology
CP 170.10 Herbal & Dietary Supplements
CP 170.30 Clinical Toxicology
CP 198 Bad Bugs
CP 198 Diabetes Elective: "Interdisciplinary Management of Diabetes"

C. Clinical / Community Outreach

- **Masters Entry Program in Nursing (MEPN) shadowing program:**

Fourth-year Medical students and MEPN students are paired and the MEPN students shadow the medical students and communicate with them about patient care. MEPN students observe: pre-rounds, rounds, seminar, and patient care from 8AM-2:30PM.

WHO: Medical students, Nursing students.

Contact: Katherine Holbrook (MEPN student), Dr. Helen Loeser, Christopher Peabody

- **Homeless Tenderloin Clinic:**

The UCSF Students' Homeless Clinic is comprised of UCSF medical students, nursing students, pharmacy students, medical residents, and physicians. Their mission statement is to provide sensitive, accessible, and high-quality health care and create an environment in which students, preceptors, and patients may teach and learn from one another at the same time.

WHO: Medical students, Nursing students, Pharmacy students, Medical residents, Physicians.

Contact: <https://www.medschool.ucsf.edu/homeless/pubClinic/tarc.asp>

- **ADEA (American Dental Education Association):**

Spearheaded one of the largest interprofessional events on campus (The High School Outreach Conference)

WHO: UCSF students

Contact: Bunly Pel (bunly.pel@ucsf.edu), past-president of ADEA

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- **Children's Health Hut:**

Its mission is to play a part in lessening the health disparities in access to care and health education among the undeserved children in San Francisco. Children's Health Hut is a campus volunteer organization that reaches out to the underserved community. It is comprised of Medical, Dental, Pharmacy, Nursing and Physical Therapy Students. Together, this organization interacts with the community by giving free medical screenings, dental screenings, and health education through games.

WHO: UCSF students

Contact: Shirin Mullen (shirin.mullen@ucsf.edu), <http://web.ucsf.edu/hut>

- **Glide Memorial Church Health Clinic:**

A federally funded Health Care for the Homeless, it is managed by the UCSF School of Nursing Adult Nurse Practitioner program in cooperation with Glide Memorial United Methodist Church, Catholic Healthcare West and other community partners. Glide Health Clinic is hoping to have affiliation with the School of Pharmacy via tele-pharmacy project and also School of Dentistry with oral health in near future.

WHO: UCSF students, Physicians, Nurse Practitioners.

Contact: Joanne Saxe (joanne.saxe@nursing.ucsf.edu)

- **AIDS Action Network**

AIDS Action Network brings students together from multiple disciplines who are interested in AIDS advocacy work. Our projects focus on: 1) Community Outreach, 2) Social Activism, and 3) Global Action, and include the annual Global AIDS Week of Action and the Mosaic Variety Show. For more info, see <http://ucsf.edu/action>.

- **UCSF Vietnamese Community Health Promotion Project (VCHPP)**

An organization dedicated to conducting research and public health programs for Vietnamese Americans. VCHPP currently manages four studies targeting hepatitis B awareness, tobacco use, and breast and cervical cancer screening in the Vietnamese American community.

WHO: UCSF students

Contact: Tung Nguyen, M.D. Internal Medicine (Tung.nguyen@ucsf.edu)

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- **SNPhA (Student National Pharmaceutical Association)/ SNMA (Student National Medical Association)**
Both organizations facilitate healthcare community outreach events, and provide opportunities to work with students from the other schools. They organized joint High School outreach events, and a Health Disparity lecture series.
WHO: Students from School of Medicine and Pharmacy
Contact: <http://rco.ucsf.edu/index.php/snma/index/>,
<http://rco.ucsf.edu/index.php/snpha/index/>
- **Project HIV**
The project, part of UCSF's chapter of the American Pharmacist Association-Academy of Student Pharmacists (APhA-ASP) is managed by students from the School of Pharmacy. The goal is to increase HIV/AIDS awareness and educate the public on various ways of prevention, myths, and treatment in a variety of settings. Project collaborates with the AIDS Action Network from the School of Medicine. Future events are planned to include School of Medicine, but scheduling conflicts seem persistent.
WHO: UCSF Pharmacy Students, future events planned to include School of Medicine
Contact: Jennifer Cocohoba (cocohobaj@pharmacy.ucsf.edu)
- **Hepatitis B Project:**
Collaboration with the San Francisco Department of Public Health. The program is a citywide effort to eradicate hepatitis B from the City of San Francisco by providing free screening efforts and affordable vaccination.
WHO: Pharmacy Students, Medical Students, Nursing Students
Contact: <http://www.ucsf.edu/sfhbc/>
- **Academic Geriatric Resource Center (AGRC):**
Offers Interdisciplinary Team Training (ITT) via six-week clinical rotations three times a year. Students and faculty from Medicine, Nursing, Dentistry, Pharmacy and Physical Therapy visit geriatric patient's homes. Emphasize student exposure to core aspects of geriatric care and encourages students to think about the older adult from a perspective other than their discipline.
WHO: UCSF students
Contact: <http://agrc.ucsf.edu/programs.html>

- **Chronic Care Project:**

Ambulatory Care clinics at Parnassus and Mt. Zion focuses on team based healthcare for patients with chronic illnesses especially diabetes, hypertension, heart disease and lung disease. Students / residents from School of Medicine (residents), Pharmacy (4th year students) and Nursing (2nd year NP students) complete one rotation with faculty supervision.

WHO: Medical students, Nursing students, Pharmacy students

Contacts: Pharmacy: Dr. Lisa Kroon (kroonl@pharmacy.ucsf.edu), Nursing: Dr. Susan Janson (susan.janson@nursing.ucsf.edu), Medicine: Dr. Molly Cook (mcooke@medicine.ucsf.edu)

- **UCSF Diabetes Clinic:**

Weekly Wednesday interprofessional clinic comprised of physicians, nurses, nutritionists, pharmacists, and students/ residents that offer patients an effective, personalized treatment plan for optimal diabetes control.

WHO: UCSF students, Physicians, Nurse Practitioners, Nutritionists, Pharmacists, Residents

Contact: http://www.diabetes.ucsf.edu/EN/dc_home/

- **UCSF Chest Clinic:**

Weekly Monday interprofessional clinic comprised of students and practitioners from Nursing, Medicine, and Pharmacy, focused on patients with a variety of lung diseases. (Dr. Susan Janson)

WHO: Medical students, Nursing students, Pharmacy students

Contact: Dr. Susan Janson (susan.janson@nursing.ucsf.edu)

D. Research

- **UCSF Health Care Disparities Research Symposium**

This symposium is an opportunity to highlight faculty research on health disparities. The goal is to build community among disparities researchers from many disciplines and across units, schools, and campus sites.

WHO: UCSF faculty, students, postdoc, resident or fellow

Contact: <http://ucsfstudents.wordpress.com/2008/08/01/ucsf-health-disparities-research-symposium/>

- **Clinical and Translational Sciences Institute:**

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An NIH-funded organization dedicated to bringing scientific discoveries to the bedside through translational research. Multidisciplinary Research Project Planning Awards are used to support development of complex cross-disciplinary research projects, through funding of activities leading to large grant applications, such as a PO1 grant.

WHO: UCSF students

Contact: <http://ctsi.ucsf.edu/>

- **Pathways to Careers in Clinical and Translational Research:**

Year-long fellowship program that is open to students of all schools for translational research, hosted by Clinical and Translational Sciences Institute

WHO: UCSF Students

Contact: <http://ctsi.ucsf.edu/about/index.php>

- **Pathways to Discovery Program**

School of Medicine program that has recently been expanded to all schools. The goal of the program is to foster the pursuit of discovery, inquiry, and innovation as part of the career of every health professional trained at UCSF. Trainees are provided with opportunities for in-depth study and experience in one of several areas of inquiry that go beyond the routine practice of health care. Research Areas consist of Clinical and Translational Research, Global Health, Health and Society, Health Professions Education, Molecular Medicine.

WHO: UCSF Students

Contact: <http://medschool.ucsf.edu/medicaleducation/pathways/>

- **Training Program in Transdisciplinary Health Policy Research (TdHPR)**

The TdHPR program trains researchers, policymakers, and practitioners to develop innovative approaches to complex policy problems in health and healthcare. From our perspective, such policies can range from proposals to revamp the health care system to better guidelines for clinicians to apply in daily practice. The program emphasizes how to use perspectives, tools, and theories of multiple academic disciplines and fields. The program seeks to train scholars to be fluent and to translate across the multiple “languages” of health policy. The goal is not just to do excellent research, but research with methods and findings sufficiently well-grounded that one can confidently offer them for use by policymakers.

Contact: <http://www.ihps.medschool.ucsf.edu/Training>

- **Global Health Sciences**

Global Health Sciences has developed and continues to develop a range of programs to prepare the next generation of researchers and clinicians for careers in global health. These programs span professional health sciences education, clinical training, and graduate research. They bring students and faculty from partner institutions in developing countries together with UCSF students in all four professional schools and the graduate division, e.g. Clinical Scholars Program.

WHO: UCSF Students, Clinicians and Faculty

Contact: <http://globalhealthsciences.ucsf.edu/>

E. Other Activities

- **Interprofessional Education Day (2006, 2007)**

The development and implementation of a unique interprofessional education experience involving patient safety and emphasizing communication and collaboration for beginning students in the health professions.

WHO: First-year students for all schools.

- **Seminar for Enhancing Interprofessional Teamwork & Communication Skills to Improve Care and Safety at UCSF.**

Seminar designed and implemented by Students for Interprofessional Learning to discuss patient safety issues that arise in inter-professional situations.

Contact: Jessica Chan (Jessica.Chan@ucsf.edu)

- **Chancellor's Health Policy Lecture Series**

The Chancellor's Series has been established to bring to the campus several times per year a major figure in health policy to raise awareness in the UCSF community of the important health policy issues of the day.

WHO: UCSF students

Contact: <http://pub.ucsf.edu/today/cache/news/200603278.html>

- **4th NaHSSA (National Health Science Student Association)**

Annual National Interprofessional Healthcare Student Conference during MLK weekend. Their mission statement: NaHSSA strives to promote collaborative patient-centered practice and teamwork through interprofessional education in order to respond to the evolving health care needs.

WHO: UCSF students

Contact: Associate Deans (Dentistry, Medicine, Nursing, Pharmacy)

- **Annual Integrative Medicine Forum**

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Held in May of each year. The 10th annual event was held in 2008. This is multi school student organized/ planned weekend event highlights integrative approaches to medicine. It involves weekly committee/ planning activities at least 6 month prior to event, and is a great opportunity to work with students from different schools.

WHO: UCSF students. Pharmacy and Medicine have been primary participants. Dentistry and PT has yet to get involved.

Contact: <http://rco.ucsf.edu/index.php/imn/index/>

- **Office of Career & Professional Development**

Prepares UCSF students, post-docs for future careers as faculty members through events, seminars, job resources, and skill development. Also has a list-serve that can be joined.

Website: <http://web.ucsf.edu/career/pff.shtml>

Professional & Academic Success Skills Series (PASS)

PASS is a series of intensive workshops designed to enhance the professional development of UCSF students and scholars engaged in research. Past topics include:

- ✓ Funding Your Research
- ✓ Giving a Dynamic Research Talk
- ✓ Setting Goals for Your Career Direction and Professional Growth
- ✓ Negotiation & Conflict Resolution for Scientists
- ✓ Publishing Your Research

List of activities held by OCPD (<http://web.ucsf.edu/career/pass/index.html>)

- **Registered Campus Organizations**

(* See the appendix for RCO initiated events in 2007 catalogue)

F. Future plans

- Kanbar Clinical Skills Simulation Center. Housed on the second floor of the UCSF library and scheduled to open in 2010. Will be open to all four professional schools and will foster an environment of collaboration and inter-professional activity.
- Collaborations between ethnic organizations in the different professions - as an example, the Latino Medical Student Association and the Latino Association of

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Pharmacy Students are partnering in the coming year to organize a health fair for the community and hold talks by Latino faculty.

- Harvard-Macy Work – Interprofessional scenario developed by Preetha Basaviah, MD; Carrie Chen, MD, MEd; Shieva Khayam-Bashi, MD; Rosemary Plank, RN, PhD; and Sharon Youmans, PharmD, MPH. The scenario was filmed and will be shown to interprofessional small groups for discussion. Eventually it will be turned into a simulation in which students will be given the scenario and make decisions on their own.
- Calendar Working Group – A group convened to align the calendars of the various schools at UCSF to enable collaboration.
- Collaborative Learning Environment: A project supported by the Center for Instructional Technology to change the current WebCT web environment to a new, more flexible system called Moodle. The hope is that this new system will provide for better collaboration between the schools and more opportunities for cross-communication between students and faculty of different professions.

III. Barriers to Expanding Interprofessional Education at UCSF

A. Challenges/ barriers for students

- Existing curricular commitments (to own program)
- Scheduling conflicts (varied schedules across schools, inability to view other school's calendar's)
- Traditional beliefs in hierarchical roles
- Split of student governments between Associated Students of UC and Graduate Student Association
- Communication (limited/ no e-mail access to other schools list serves)

B. Challenges/ barriers for faculty

- Scheduling conflicts
- Lack of resources (funding, IPE models, etc.)
- Lack of team culture/ cultural barriers
- Lack of resources (e.g. administrative support, funding, educational)
- Student's variable educational/ clinical knowledge
- Competition for clinical sites (-> need to think less territorial)

C. Suggestions

- Start up UCSF IPE website with resources for students AND faculty

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- Write a grant to get funding for IPE Center (even if virtual), that provides resources and supports faculty's and a staff person's efforts.
- Get buy in/ leadership for IPE from UCSF's chancellor and CEO
- Advocate IPE at state level. Expand professional boards to include healthcare professionals from other areas. (e.g. Board of Medicine includes PharmDs, Board of Pharmacy include MDs, etc.)
- Foster collaboration with UC Hastings, with whom UCSF has a partnership agreement going back years.
- Define measurable endpoints for success/ benefit of IPE/ IPP (e.g. patients, institution).
- Provide larger classroom to accommodate students from two or more schools at the same time.
- Facilitate better advertisement of elective classes to all students. (e.g. Better connection between webct and registrar)
- Implement Student survey idea about interprofessional education – in Spring
- Organize interprofessional social teams/families
- Hold Interdisciplinary Monthly/ Quarterly Series (student conversations, seminars, etc.)
- Develop Problem-Based Learning Models for Interprofessional Small Group
- Designate a communications officer in all campus student organizations, who will facilitate communications/ more IPE activities across organizations. (monthly / quarterly meetings of all/ relevant communication officers)
- Foster relationship with additional clinical sites who already implement interprofessional practice, to obtain additional IPE focused preceptorships.
- Foster development of faculty IPE champions

D. Opportunities

- **Global Health Sciences Program**

UCSF Global Health Sciences (GHS) is dedicated to improving health and reducing the burden of disease in the world's most vulnerable populations. It integrates UCSF expertise in all of the health, social, and biological sciences, and focuses that expertise on pressing issues in global health.

Contact: <http://www.globalhealthsciences.ucsf.edu/about/Mission.aspx>

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- **International Center of HIV/AIDS Research and Clinical Training in Nursing.** “New” study in China that evaluates quality of hospital care to HIV/AIDS patients in 800 tertiary hospitals.
WHO: Nursing Students, but upcoming potential for all UCSF students
Contact: <http://nurseweb.ucsf.edu/www/ctrhiv.htm>, Dr. Bill Holzemer
- **International Nursing Group**
Primarily focused on bringing together nurses interested in working or volunteering internationally in order to share ideas, experiences and network, but open to all students. Organizes UCSF’s International Woman’s Day, facilitates lunch time seminars.
WHO: Currently only Nursing Students, but open to all UCSF students
Contact: <http://nurseweb.ucsf.edu/public/ing/>
- **APhA-ASP**
Manages several community health projects in School of Pharmacy. May be an opportunity to expand collaboration and work with students from other schools. Please contact Community Affairs Officers.
WHO: School of Pharmacy Students
Contact: Karoline Tum, Leslie Tieu <http://rco.ucsf.edu/index.php/aphaasp/>
- **The Triad Study for Optimal Patient Safety (TOPS)**
In 2005, UCSF Medical Center was one of three facilities in the Bay area to receive funding as part of the Gordon & Betty Moore Foundation’s project, Triad Study for Optimal Patient Safety (TOPS). The Medicine service, nursing, support staff, and pharmacy all participated in the two year project to improve communications and teamwork on this complex medical unit. The program completed in March, 2007, but the skills learned by staff are still being practiced to enhance the care to these patients. Plans are currently underway to harvest successes from this project and diffuse them throughout the Medical Center.
Contact: Robert Wachter, MD (bobw@medicine.ucsf.edu)
- Rosalia Mendoza, MD, fellow in the Department of Family and Community Medicine - She developed an oral health component to Family Medicine training for residents and medical students. She sees collaboration with dental fellows/attendings to help improve the medical school oral health curriculum for

3rd-year students in the Family Medicine rotation and for Family Medicine residents to prevent early childhood caries.

IV. National / International IPE Models

A. U.S. Universities with IPE centers, offices or initiatives

- **Thomas Jefferson University's Jefferson Interprofessional Education Center.**
Highlight: Multidisciplinary learning model: "This two-year program is required for all first-year health profession students, which includes those studying medicine, nursing, physical therapy, and occupational therapy. The students are grouped into teams of at least two medical students and one nursing student, and each team is partnered with a person living with a chronic condition, who serves as the "patient mentor."
Launched: 2007
Info: <http://jeffline.jefferson.edu/jcipe/>
- **University of Washington, Seattle; Center for Health Sciences Interprofessional Education and Research**
Highlight: UW Innovative Funds Project
 "The goal of the Innovative Funds Project is to develop a UW Health Sciences Objective Structured Clinical Examination (OSCE) to certify the competence of students graduating from Medicine, Dentistry, Pharmacy, Social Work, and Nursing in core skills common to these professionals and in skills specifically required to collaborate in interprofessional teams."
Launched: 2002
Info: <http://interprofessional.washington.edu/>
- **St. Louis University's Center for Interprofessional Education and Research**
Highlight: "Focused on offering and further developing collaboratively courses that have objective(s) and experiences, promoting interprofessional competence, conducting interprofessional community outreach and interprofesional research."
Launched: 2002
Info: <http://www.slu.edu/centers/interpro/>
- **Creighton University**
 1. Medical Center Office of Interprofessional Education
Highlight: "Collaborative Care Seminar. The seminar is designed to provide Creighton health professions students and students of related disciplines an opportunity to learn from and about each other's professional roles and

responsibilities. One half-day seminar is offered each semester for students in dentistry, medicine, nursing, occupational therapy, pharmacy, physical therapy, and social work.”

Launched: 2005

Info: <http://www.creighton.edu/ipe/>

2. School of Pharmacy’s Office of Interprofessional Scholarship, Service and Education

Highlights: “The office offers interprofessional community learning activities for students in medicine, nursing, pharmacy, physical therapy and occupational therapy. These community activities currently include the Native American Outreach and the International Outreach to the Dominican Republic.”

Launched: 2001

Info: <http://oisse.creighton.edu/default.asp>

- **Center for Interprofessional Education at the University of Minnesota.**

Highlight: “ Priority Initiatives at the center consist of developing and fostering common ground (leadership and teambuilding, quality improvement and patient safety, health informatics, health policy and society, care systems), new models of care delivery (chronic care, inpatient critical care, health promotion, prevention and maintenance,) and interprofessional outcomes (knowledge about the roles of other health professionals, ability to work with other health professionals in the context of a team where each member has a clearly defined role, application of disciplinary strengths of health professionals for their highest and best value in health promotion, prevention, and care delivery).”

Launched: 2006

Info: <http://www.ipe.umn.edu/>

- **Medical University of South Carolina’s Interprofessional Initiative**

Highlights: “First year and second year student interprofessional days, Interprofessional Team Case Competition (Enhancing Patient Safety through Team Innovation).”

Launched: 2007

Info: <http://www.musc.edu/academics/interprofessional>

B. Selected Non U.S. Universities with IPE Centers/ Offices

- **The University of Toronto Office of Interprofessional Education Initiative**

Highlights: “A three year research study, Structuring Communication Relationships for Interprofessional Teamwork (SCRIPT) Program seeks to transform hospital Clinical Teaching Units into settings where interprofessional, collaborative patient-centered practice is enacted, learned and evaluated. A competency-based, longitudinal curriculum design will include a mandatory core curriculum, complementary learning activities, simulation experiences, and a 4-week clinical placement where students will learn how to apply the theoretical concepts of collaboration in practice settings.”

Launched: 2006

Info: <http://ipe.utoronto.ca/>

- **Queens University’s Office of Interprofessional Education and Practice**

Highlight: “The South Eastern Interprofessional Collaborative Learning Environment (SEIPCLE) project. The SEIPCLE Project represents a collaboration of several health care stakeholders in the Kingston community. Supported by Health Force Ontario, this initiative aims to develop a collaborative learning environment that supports interprofessional education and care. This environment will form a foundation to enable and support current and future caregivers to work effectively within a collaborative patient/family-centered care model. Caregivers, patients, families, students and volunteers will participate as educators and learners within the collaborative learning environment.”

Launched: 2007

Info: <http://meds.queensu.ca/oipep/>

- **New Foundland Memorial University’s Centre for Collaborative Health Professional Education**

Highlight: In 2006 three IPE modules, (Health and Wellbeing of Children; HIV/AIDS; and Geriatric Care) were first implemented to students from their schools of Medicine, Pharmacy, Nursing, and Social Work. This was followed by conducting a student survey to obtain feedback about their experience.

Launched: 2006

Info: <http://www.med.mun.ca/cchpe/IPE.asp>

C. Selected Non U.S. IPE Consortiums, Associations, Collaboratives, and Networks

- **Australian Capital Territory Health Interprofessional Learning Project (Australian Department of Health)**

Highlight: “A collaborative research partnership was formed between the Centre for Clinical Governance Research (CCGR) at the University of New South Wales (UNSW), ACT Health, the Australian National University, the University of Canberra, the University of Sydney, the University of Queensland and the Australian Patient Safety Foundation. Together the partners are conducting a four-year Australian Research Council (ARC) linkage project, ‘An action research project’ to strengthen inter-professional learning and practice across the ACT Health system’. The project’s goal is to use IPE as the basis for improving IPP, leading to enhanced safety and quality of care for patients, and improved morale and outcomes for patients, staff and students. The project’s specific aims are to enhance teamwork, collaboration and the sharing of ideas, knowledge and practice amongst clinicians, academics and students.”

Launched: 2004

Info: <http://www.health.act.gov.au/c/health?a=da&did=10153142>

- **Institute of Interprofessional Health Sciences Education, Canada**

Highlights: “The Institute of Interprofessional Health Sciences Education is a virtual learning centre supported by 4 universities (McMaster University, University of Ottawa, Laurentian University and Western University) and by the Council of Ontario Universities (COU), and funded by Health Canada. Their’ IPE for patient centered collaborative practice model’ is designed to reinforce the inter-relationship between learner outcomes and collaborative practice by focusing on learners as they transition from academic to clinical environments, and on clinicians as they work together and with learners.”

Launched: 2008

Info: <http://www.iihse.ca/>

- **The Canadian International Health Collaborative**

Highlight: “This is a hub for Canadian interprofessional activity. As a Canada-wide initiative, the CIHC developed a start-up structure that ensures all interprofessional projects across the country have a shared venue for exchanging ideas and promising practices related to interprofessional education, collaborative practice and patient-centered care.”

Launched: 2006

Info: <http://www.cihc.ca/>

- **UK Centre for the Advancement of Interprofessional Education (CAIPE)**

Highlight: “A virtual hub that is dedicated to the promotion and development of interprofessional education (IPE) with and through its individual and corporate members, in collaboration with like- minded organizations in the UK and overseas. It provides information and advice through its website, bulletins, papers and outlets provided by others, and has a close association with the Journal of Interprofessional Care. CAIPE also delivers workshops which facilitate development in IPE and foster exchange and mutual support between members and others.”

Launched: 1987

Info: <http://www.caipe.org.uk/>

- **European IPE Network**

Highlight: “The EIPEN is a network of sixteen academic and non-academic organizationsEIPEN aims to develop and sustain a network in the EU to share and develop effective interprofessional vocational training curricula, methods and materials for improving collaborative practice and multi agency working in health and social care.”

Launched: 2004

Info: <http://www.eipen.org/>

- **The International Association for Interprofessional Education and Collaborative Practice**

Highlight: “Conceived in Vancouver, Canada, in 2004 during the second All Together Better Health Conference. The Association promotes and advances scholarship and informs policy in interprofessional education and collaborative practice worldwide in partnership with patients, colleagues, communities and other organizations.”

Launched: 2005

Info: <http://www.interedhealth.org/site/>

V. Resources

A. General

- Several fully developed team based, practice and generic clinical IPE modules
Info: http://www.iihse.ca/_bin/resources.cfm
- The Prevention Education Resource Center (PERC) is a web- based repository of educational materials related to prevention and population health. The site

promotes collaboration across health care disciplines, professions and institutions by facilitating the exchange of teaching resources and connecting educators.

Info: <http://www.teachprevention.org/>

B. Publications on Interprofessional Education

- Developing Health Care Teams. A Report by the Academic Health Center Task Force on Interdisciplinary Health Team Development. <http://www.ahc.umn.edu/tf/ihtd.html>
- Making interprofessional education real: a university clinic model. Australian Health Review, August 1, 2007, Allison, Heather D; Et al; Hill, Anne E; Moran, Monica C; Copley, Jodie A. <http://www.highbeam.com/doc/1P3-1326950141.html>
- Hugh Barr. Interprofessional Education: Yesterday, Today and Tomorrow. UK Centre for Interprofessional Advancement of Interprofessional Education
- The Interprofessional Education Joint Evaluation Team. D Freeth, M Hammick, I Koppel, S Reeves, H Barr. UK Centre for Interprofessional Advancement of Interprofessional Education. A Critical Review of Evaluations of Interprofessional Evaluation. May, 2002.
- Marcel D'Eon. A blueprint for interprofessional learning. Medical Teacher, Vol. 26, No. 7, 2004, pp. 604-609.
- Yvonne Steinert. Learning together to teach together: Interprofessional education and faculty development. Journal of Interprofessional Care, (May 2005) Supplement 1: 60 – 75.
- McPherson K, Headrick L, F Moss. Working and learning together: good quality care depends on it, but how can we achieve it? Quality in Health Care, 2001;10: ii46-ii53.
- D'Amour D and Oandasan I. Interprofessionality as the field of interprofessional practice and interprofessional education: An emerging concept. Journal of Interprofessional Care, (May 2005) Supplement 1: 8 – 20.
- Oandasan I and Reeves S. Key elements for interprofessional education. Part 1: The learner, the educator and the learning context. Journal of Interprofessional Care, (May 2005) Supplement 1: 21 – 38.
- Parsell G, Bligh J. Interprofessional learning. Multiprofessional education in Europe: an overview. Postgrad Med J 1998; 74: 89–95. 2. Goble R.

C. Grant opportunities

- California Endowment -<http://www.calendow.org/>

- California Wellness Foundation - <http://www.tcwf.org/>
- San Francisco Foundation - <http://www.sff.org/>
- Robert Wood Johnson Foundation - <http://www.rwjf.org/index.jsp>
- Blue Shield of California Foundation - <http://www.blueshieldcafoundation.org/>
- Agency for Healthcare Research and Quality - <http://www.ahrq.gov/fund>
- American Academy of Family Physicians - <http://www.aafp.org/x21014.xml>
- American Heart Association - <http://www.americanheart.org/research/>
- Centers for Disease Control - <http://www.cdc.gov/od/pgo/funding/funding.htm>
- Community of Science Funding Opportunities - <http://fundingopps2.cos.com>
- Federal Commons - <http://12.46.245.173/cfda/cfda.html>
- Federal Register - <http://www.gpoaccess.gov/fr/index.html>
- Grants.Gov - <http://www.grants.gov>
- GrantsNet (Health & Human Resources) - <http://www.hhs.gov/grantsnet>
- Health and Human Services - <http://www.hhs.gov/grants>
- NIH Contracts & Grants - <http://www.nih.gov/grants>
- National Institute of Nursing Research - <http://www.nih.gov/ninr/research.html>
- National Library of Medicine - <http://www.nlm.nih.gov/ep>
- National Science Foundation - http://www.nsf.gov/funding/research_edu_community.jsp

VI. Conclusion

There is a global trend towards interprofessional education and practices. Many national and international organizations have already adopted models of interprofessional education, in light of its benefits, e.g. maximized efficiencies, reduced errors (malpractice), and overall improved patient care. We found an abundance of interprofessional activities at UCSF, ranging from pediatrics to geriatrics, from first-year students to clinical students, residents, and fellows. Many of these were student-initiated electives and volunteer opportunities. There are a surprising number of clinical learning opportunities that are interprofessional. Also, we found that a large number of student- or faculty-run electives are open to students from all schools.

While individuals from the UCSF community have implemented these IPE projects, they have not been coordinated in a centralized manner; in other words, there is no administrative structure to support interprofessional activities or education. Also, there have been no specific criteria set for conducting successful IPE electives or modules. UCSF's size has made it challenging to centralize IPE in the past, yet we hope that the information in this report will enable UCSF to move forward rapidly and incorporate the core concept of interprofessional education and practices.

We propose the following:

Address and eliminate current barriers to IPE, identify objectives to accomplish (from list of suggestions), prioritize them, and assign immediate, short, and long term goals. Immediate steps that should be taken consist of writing an IPE grant, hosting an IPE website (Office of Career Development has offered to keep and manage it for now). Short term goals include beginning a quarterly IPE event (weekend day IPE seminar, utilize existing IPE educational models, see resource section), facilitating the implementation of IPE communication officers at all relevant organizations and have them meet quarterly. Long term goals include the launching of an IPE Center, with the staff from each school and departments to contribute their pieces into this centralized organization. Curriculum changes maybe necessary for the adjustment into global calendar planned for 2010. Development of new (better version) WebCT should be implemented in a way that it is interconnected with office of registrar for easier access to registration and schedule of classes offered each quarter.

Appendix

I. List of Electives open to students from all schools