Interdisciplinary Education in the University of Alaska Anchorage College of Health:
The current environment and possible future directions

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This white paper is intended to be a starting point for discussing and planning interdisciplinary education within the College of Health (COH) at UAA. The first part of the paper offers definitions, a review of the literature, an examination of what is occurring at UAA’s peer institutions, and an environmental scan of existing interdisciplinary efforts within the COH. The last part of the document contains ideas that could be incorporated into a plan. The paper ends with a list of resources and references.

Definitions

The *UAA Catalog 2012-2013* has the following definition of an interdisciplinary/multidisciplinary course:

> Courses that explore the broader meaning and significance of concepts, principles or research techniques common to several disciplines are called interdisciplinary. Courses that examine a common topic or problem by drawing upon the perspectives of many disciplines are called multidisciplinary (p. 62)

This definition, as will be seen below, is not consistent with definitions of interdisciplinary or multidisciplinary found in the literature.

Dr. Beth Ellen Davis (personal communication, September 6, 2012), in her recent presentation at UAA made a distinction between four types of teamwork: unidisciplinary, multidisciplinary, interdisciplinary and transdisciplinary. Unidisciplinary, also known as intra-disciplinary, involves two or more parties from the same discipline. Multidisciplinary is an additive approach where 3 or more disciplines work together but independent of each other. Interdisciplinary also involves 3 or more disciplines but there is shared responsibility, consensus, and coordinated teamwork. Interdisciplinary is synergistic, not merely additive. Transdisciplinary work transcends discipline boundaries, leads to new fields of study and role expansion. Transdisciplinarity may be aspirational. It is worth noting that the National Institutes of Health (NIH) uses the word transdisciplinary in many of its current research endeavors.

Hammick, Freeth, Koppel, Reeves, and Barr (2007, p. 736) in a systematic review of interprofessional education (IPE) outcomes (discussed below) provide the following definition: “Interprofessional education is those occasions when members (or students) of two or more professions learn with, from and about one another to improve collaboration and the quality of care.” They differentiate IPE from multiprofessional education (MPE) where outcomes are undefined and learning is simply in tandem. Barr (2002) points out that the word multiprofessional is a term
coined by the World Health Organization and is used synonymously for interprofessional education.

For the purposes of this paper, the words interdisciplinary or interprofessional are used as synonyms. The use of this term is consistent with the Hammick et al. (2007) definition.

Literature Review

In 2011 a conference on interprofessional education was convened by six national education organizations. The conference was a collaboration of the professional educational organizations in the fields of Nursing, Osteopathic Medicine, Public Health, Pharmacy, Dentistry, and Allopathic Medicine. The conference report pointed out that in spite of a call from the Institute of Medicine in 2001, training institutions have not made progress in interdisciplinary education. “The educational experience must shift from one in which health profession students are educated in silos to one that fosters collaboration, communication and a team approach.” (Interprofessional Education Collaborative, 2011, 7)

The academic literature, grey literature and Internet were searched in order to describe the current state of knowledge on approaches to interdisciplinary education. Three reviews of the literature on interdisciplinary education were found.

A systematic review published in the journal Medical Teacher included 21 different studies of interprofessional education (Hammick et al., 2007). Most of the studies included in this review were focused on undergraduate health professional education. Across the studies the two most commonly sets of positive results were in terms of students’ views of interdisciplinary learning experiences, and increases in knowledge and skills related to interprofessional collaboration. A smaller number of studies reported positive changes in attitudes and perceptions toward interdisciplinary work, transfer of learning to practice settings, changes in the service delivery system and measured benefits to patient care. The latter category of studies was focused on improved screening and prevention. Some negative or mixed findings were reported in the area of changes in attitudes and perceptions toward interdisciplinary work.

A Cochrane Review article (Reeves, Zwarenstein, Goldman, Barr, Freeth, Koppel & Hammick, 2010) used rigorous methodological inclusion criteria and as a result included only six studies of interprofessional education outcomes. Four of the studies were randomized-control trials while the other two were quasi-experimental before-after designs. The six interventions were primarily short-term continuing education type of interventions, the contact hours ranged from the equivalent of 1 to 3 credits. Results were reported in terms of patient outcomes, provider behavior, and provider knowledge. The bottom line in terms of interprofessional outcomes was mixed, “two reported positive outcomes, two
reported a mixed set of outcomes (positive and neutral effects), and two reported IPE had no impact on either health care processes or patient health care or outcomes.” (Reeves et al., 2010, p. 238).

Barr (2001), in his review, provided a history of efforts to develop and promote interprofessional education. In addition, Barr discussed pedagogy and identified several pedagogical approaches (2001, 19):

- Common learning, such as sitting in the same course as other disciplines. He cautioned however, that this might not be enough to change attitudes and perceptions of the learners.
- Teaching methods that encourage participants to express views, exchange experience and expose prejudice
- Problem-based learning and collaborative inquiry
- Observation-based learning, one example is joint visits to a patient or client by students from different professions
- Simulation-based learning
- Practice-based learning where two or more students from different professions may be assigned to the same community-based placement/internship

Similar to problem-based learning and simulation based learning, Hammick et al. (2007, 741-742) report on IPE efforts focused on specific topics. The topics these authors identified included “alcohol abuse, dealing with psychiatric emergencies, deliberate self-harm and community services for people with learning disabilities...breaking bad news...Chlamydia screening...rural training”

Barr (2001, 31) developed a continuum or typology of approaches interprofessional education:

1. Each profession organizes its own teaching, unaware of what is taught by other professions
2. Teachers are aware of what is covered by professions, but with no formal contact
3. Consultation about teaching programs between teachers from different professions
4. Teaching relating to the work of other professions is included
5. Time tabling is arranged to permit to schedule the same learning experiences
6. Joint teaching in part of otherwise separate programs
7. Sessions scheduled for multiprofessional consideration of topics
8. Multiprofessional and uni-professional teaching runs side by side
9. The program emphasizes multiprofessional learning, each professional looking at themes from its perspective
10. Each profession looks at the subject from its own perspective and that of the other professions
11. Multiprofessional education is based upon experience of the real world.

Using this continuum I believe the COH is currently at step 2 or 3. There are some programs within the COH, such as LEND, which have progressed much further down the continuum. The current state of interdisciplinary education in the COH is discussed in greater detail below.

Another useful point made by Barr (2001) is that the interdisciplinary teaching approach has to be tailored to the student’s educational and experiential level. The outcomes for beginning students may be to increase their knowledge and improve their attitudes toward other professions whereas for higher-level students (e.g. graduate students) the goal may be to impact patient/client care.

**Competencies**

The literature search revealed that competencies are frequently used to organize interdisciplinary curricula. Barr (2001, 16) makes a distinction between competencies,” held in common between all professions...those that distinguish one profession from another...those necessary to work effectively with others.”

Three examples of the use of competencies can be found in 1) a report from an interprofessional expert panel; 2) from the College of Health Disciplines at the University of British Columbia; and 3) from the Center for Interprofessional Education and Collaborative Practice at the University of Minnesota.

The interprofessional expert panel-- a collaboration of the professional educational organizations in the fields of Nursing, Osteopathic Medicine, Public Health, Pharmacy, Dentistry, and Allopathic Medicine – started with the core competencies for health professionals identified by the Institute of Medicine in 2003. This expert panel recently published *Core Competencies for Interprofessional Collaborative Practice* (Interprofessional Education Collaborative, 2012). The expert panel identified four course competencies that transcend the competencies of the individual health professions.

- Values/Ethics for Interprofessional Practice
- Roles/Responsibilities for Collaborative Practice
- Interprofessional Communication
- Interprofessional Teamwork and Team-based Care (2012, 16)

Similarly, the College of Health Disciplines at the University of British Columbia has developed a competency framework for interprofessional education. This framework has three domains, but the third domain is split into four sub-domains:

- Interpersonal and communication skills
- Patient-centered and family focused care
- Collaborative practice
  - Collaborative decision making
  - Roles and responsibilities
The University of Minnesota Academic Health Center, Center for Interprofessional Education and Collaborative Practice has designed a three-phase program where students attain specific interprofessional competencies. This program is named 1Health (From http://www.ahc.umn.edu/1health/):

- Phase 1, orientation, takes place in the fall and is comprised of two parts: Day 1, and the Foundations of Interprofessional Communication & Collaboration (FIPCC) course.
- Phase II, building the toolbox, occurs during the middle portion of a student’s program and provides options of interprofessional courses and experiences for students to choose from that are approved by their school/college.
- Phase III, authentic experiences, is the clinical or practice phase of the program when the students begin practicing in authentic environments.

A competency-based approach to curriculum is compatible with the accreditation standards of several of the disciplines within UAA COH (e.g. Dental Hygiene, Paralegal, Public Health, Social Work). Furthermore, a competency-based approach is consistent with the assessment of educational outcomes now mandated at UAA.

**Outcomes**

What can be achieved through interdisciplinary curricula? Several authors have identified both short-term and long-term outcomes. Effective interdisciplinary education can lead to changes in attitude toward other professions, increased knowledge and skills in collaborative behavior, improved patient care, flexible deployment of workforce (Hammick et al., 2007; Reeves et al., 2010).

Hammick and colleagues (2007, 737) put forth the following hierarchy of outcomes:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Measure</th>
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<tbody>
<tr>
<td>Level 1: Reaction</td>
<td>Learner’s views on the learning experience and its interprofessional nature</td>
</tr>
<tr>
<td>Level 2a: Modification of perceptions &amp; attitudes</td>
<td>Changes in reciprocal attitudes or perceptions between participant groups. Changes in perception or attitude towards the value and/or use of team approaches to caring for a specific client group.</td>
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<tr>
<td>Level 2b: Acquisition of knowledge</td>
<td>Including knowledge and skills</td>
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& skills linked to interprofessional collaboration.

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<tr>
<th>Level 3: Behavioural change</th>
<th>Identifies individuals’ transfer of interprofessional learning to their practice setting and their changed professional practice.</th>
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<tbody>
<tr>
<td>Level 4a: Change in organizational practice</td>
<td>Wider changes in the organization and delivery of care.</td>
</tr>
<tr>
<td>Level 4b: Benefits to patients/clients</td>
<td>Improvements in health or well being of patients/clients.</td>
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The ultimate outcome is better care. It is debatable whether the College of Health can measure outcomes 4a or 4b a timely or practical manner. However, the simulation laboratory offers the opportunity to measure these outcomes in a role-played situation.

The possible outcomes and their connection to the College of Health’s efforts in interdisciplinary education are reflected in the following logic model.
Logic Model for Interdisciplinary Curricular Efforts

**Goal:**
The goal of interdisciplinary education is to ensure that students in the health professions build a skill set that will ultimately increase patient safety, reduce errors, maximize efficiencies, and improve quality of care (adapted from The Center for Innovation in Interprofessional Education at University of California San Francisco).

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Activities</th>
<th>Outputs</th>
<th>Short</th>
<th>Medium</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interdisciplinary Committee &amp; SAM Interdisciplinary Committee</td>
<td>Create plan for interdisciplinary curricular efforts</td>
<td>New degrees, double majors, dual degrees, OECs, Certificates, Minors</td>
<td>Increased Student Credit Hour Production</td>
<td>Better increased collaboration between disciplines and programs (agencies)</td>
<td></td>
</tr>
<tr>
<td>Associate Dean for Curriculum</td>
<td>College Curriculum committee attuned to possibilities for interdisciplinary courses</td>
<td>COEs for new or cross-listed courses</td>
<td>Increased knowledge about and positive attitudes toward other professions</td>
<td>Optimal deployment of workforce</td>
<td></td>
</tr>
<tr>
<td>Seed money for Interdisciplinary Curriculum Efforts</td>
<td>Seek funding for interdisciplinary efforts</td>
<td>Measures of knowledge, skills, attitudes relevant to interdisciplinary education</td>
<td>Increased knowledge and skills in collaborative behavior</td>
<td>Improved service delivery</td>
<td></td>
</tr>
<tr>
<td>Existing collaborations within college LEND, Legal Nurse Consultant, Cross-listed Courses</td>
<td>Evaluate outcome of Interdisciplinary Curriculum Efforts</td>
<td>Faculty training for interdisciplinary and team/co-teaching</td>
<td>Increase in interdisciplinary research endeavors (a likely side effect)</td>
<td>Reduction in medical errors</td>
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<tr>
<td></td>
<td></td>
<td>Faculty feel prepared for interdisciplinary and team/co-teaching</td>
<td>High ratings of student satisfaction</td>
<td>Better patient care</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Increased use of simulation</td>
<td>Increased use of simulation</td>
<td>Increased prevention of adverse conditions</td>
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</table>

**Assumptions:** Buy-in by faculty and departments

**External Factors:** Workload issues around team/co-teaching, “turf” and curriculum protection by other colleges/departments
Interdisciplinary Education at UAA’s Peer Institutions

The UAA office of Institutional Research maintains a list of comparator and aspirational peer institutions (http://www.uaa.alaska.edu/ir/uaapeers.cfm). The web sites of the 18 aspirational peer institutions were searched to learn how they are approaching interdisciplinary (a.k.a. interprofessional) education.

Almost all the aspirational peer institutions offer interdisciplinary majors and minors at the undergraduate level. Like UAA, several also provide an option for an interdisciplinary Master’s degree (see UAA Catalog page 271). For example, Ball State University offers interdisciplinary minors that appear to be in area studies (e.g. African Studies, Ancient Studies). The University of Akron offers interdisciplinary certificate programs; examples relevant to this college are addiction studies and aging services (http://www.uakron.edu/academics_majors/undergraduate-bulletin/docs/certificates.pdf). The Western Michigan University College of Health and Human Services has developed a Bachelor of Science degree in Interdisciplinary Health Services (BS-IHS). This degree is designed to produce graduates who are competent working on interdisciplinary teams. The BS-IHS is specifically designed for those already holding an Associates Degree and has specific pathways to graduate programs in Occupational Therapy and Physician Assistant (http://www.wmich.edu/hhs/hsv/program.html).

Northern Illinois University developed guidelines for the development of interdisciplinary courses (http://www.niu.edu/provost/policies/appm/III18.shtml). These guidelines address issues such as where credit hour production is assigned, how to deal with grade appeals, and prefix designators for different types of interdisciplinary courses.

San Francisco State University has a list of “Top Ten Suggestions for Interdisciplinary Teaching” (http://ctfd.sfsu.edu/feature/top-ten-suggestions-for-interdisciplinary-teaching.htm). The list also includes web links to sites related to interdisciplinary teaching as well as references. San Francisco State has also developed policy regarding interdisciplinary minors, an undergraduate interdisciplinary council and guidance for removing impediments to interdisciplinary activities (http://www.sfsu.edu/~senate/documents/attachments/05.01.12/UICRevisedSp2012.pdf)

The University of Akron showcases interdisciplinary collaborations on their Academic Affairs web site. Currently the web site showcases three programs, one of which is a collaboration between faculty members in Nursing and Consumer Sciences focused on the oral health of children from low-income households (http://www.uakron.edu/provost/communication/across-the-commons/fall-2011/interdisciplinary-distinction.dot)
The information from UAA’s aspirational peer institutions will be useful in developing policies and procedures related to interdisciplinary efforts. There may also be some useful curriculum documents. However, none of these institutions appear to have a primary mission focused on interdisciplinary education.

One academic institution, not an aspirational peer of UAA, which does have a mission devoted to interdisciplinary education, is the College of Health Disciplines at the University of British Columbia (UBC). The College’s web site specifically states, “The mandate of The College of Health Discipline is to advance interprofessional education, practice and research” (http://www.chd.ubc.ca/about-us/what-we-do). The UBC competency framework was discussed above. An exploration of the College’s web site reveals a plethora of documents, events, and structures related to interdisciplinary education.

Current COH Environment

The current UAA Catalog lists 46 different degrees, certificates or minors awarded through the College of Health. There are seven occupational endorsement certificates, five undergraduate certificates (2 of these are suspended and one is phasing out), ten associate degrees, four minors, ten Bachelor’s degrees, one post-Baccalaureate certificate, six graduate certificates, and three Master’s degrees. These College of Health degrees, certificates and minors are made up of 485 credit courses offered through the 23 course prefixes. Of the 485 courses, 31 (6%) are cross-listed with other units; only 12 of the 30 cross-listed courses are cross-listed within the college.

While there are likely many opportunities for interdisciplinary education within the programs listed above, two of the minors provide a telling example of missed opportunities: the minor in Gerontology and the minor in Addiction studies.

The interdisciplinary minor in Gerontology is offered through the College of Health, although the chairperson of this minor is in CAS. The minor requires 3 courses (9 credits), none of these required courses are offered through the College of Health. Nine additional credits of electives are required for the minor, while two of the suggested courses are from the COH, it is possible to graduate with this minor without taking a course in the College of Health.

There is a minor in Addiction studies offered through the Human Services Department (HUMS). This minor could involve interdisciplinary education, but that does not fit with the current structure. The minor requires 2 courses (6 credits) both offered through the Human Services Department. Twelve additional credits of electives are required for the minor, all of the elective courses, with the exception of NS 428, are offered by HUMS.
General Education Requirements (GERs)

There are currently no tier 1 General Education Requirement (GER) courses (oral communication, quantitative skills, written communication) offered within the College of Health. Tier I GER courses are required for any Associates of Applied Science (AAS) and bachelor’s degrees. To obtain a bachelor’s degree students must also complete 22 credits in the four tier II disciplinary areas (fine arts 3 credits, humanities 6 credits, natural science 7 credits, and social science 6 credits). The College of Health offers no tier II GER courses in the fine arts, humanities, or natural sciences areas. There are eight tier II social science courses offered in the College of Health: HS 220, HUMS/SWK 106, JUST 110, JUST 251, JUST 330, JUST 375, LEGL 101, and SWK 243.

All of the bachelor degree programs within the College offer a tier III GER, of which 3 credits are required for a degree. The tier III GERs within the College are DH 424, HS 491, HS 492, HUMS 495B, JUST 460, JUST 463, MEDT 302, NS 411, SWK 431.

Interdisciplinary collaborations within the College

• Center for Addressing Health Disparities through Research and Education (CAHDRE) grant
CAHDRE supported a small group of COH faculty and faculty from other units to teach a new interdisciplinary course, HNRS 292 Health Disparities in Asian Pacific Islanders, in Fall 2011. This course was also a Social Science GER. The CAHDRE grant also supported six faculty members from across the University to participate in a summer institute on health disparities. The CAHDRE Federal grant ended in October of 2012.

• Leadership and Education in Neurodevelopmental Disorders (LEND) grant
The LEND grant requires interdisciplinary leadership education at the graduate level. There are core faculty from nursing, social work, occupational therapy, speech language pathology, pediatric medicine, public health, psychology, special education, and family. LEND has just begun its second year of operation.

• Interdisciplinary Clinical Simulation Center
This Center is housed in the new Health Sciences Building. Experiences can encompass a variety of professions using high and low-tech simulators as well as standardized patients. The interprofessional simulation committee has members from several different units in both the College of Health and the College of Arts and Sciences.

• Interprofessional practice experiences
Nursing and Occupational Therapy have designed interdisciplinary clinical experiences with clients at the Pioneer Home. These occur on a regular basis during each fall semester.
• Children’s Mental Health  
The Children’s Mental Health graduate certificate involves Social Work, Psychology and Counseling & Guidance. Interdisciplinary practice courses have been developed for graduate students. A small number of graduate students have participated in this graduate certificate.

• The Institute for Healthcare Improvement (IHI) Open School for Health Professions  
The IHI is an interprofessional educational community that gives students the skills to become agents of change in health care improvement. Students in nursing, medicine, allied health, pharmacy, dentistry, policy and other health professions are encouraged to participate in order to gain and improve skills like quality improvement, patient safety, teamwork, leadership and patient-centered care. This opportunity is free and available through online classes, podcasts and videos. University of Alaska Anchorage students have the opportunity to participate in monthly multidisciplinary on-campus events as well. At this point, the IHI has not had many participants outside of the School of Allied Health.

• The Legal Nurse Consultant certificate  
This new program offered through the Justice Center requires that students possess an Associates or Bachelor’s degree in Nursing.

• School of Allied Health, Interprofessional Curriculum Committee  
This committee was formed this year with the expressed purpose of promoting interdisciplinary education within the School of Allied Health. At this point it is unclear whether this committee will lead our efforts, get in the way, and/or get ahead of interdisciplinary education efforts within the College.

• Anticipated Activities  
A dual MSW/MPH degree has been proposed as well as a minor in Children’s Mental Health

This examination of the College of Health’s current environment shows that there is relatively little interdisciplinary education or collaboration. What is taking place is either grant-funded or due to the efforts of one or a few faculty members. In the typology presented above by Barr (2001, 31), for the most part faculty and program may be aware of what is covered by professions, but have no formal contact with each other.

Possible Directions

There are three general areas from which interdisciplinary education can be approached: courses and curriculum, teaching methods, and policy. Efforts in these directions are not mutually exclusive and can be undertaken simultaneously.
Courses and Curriculum

GERs. Develop tier I GERs within the college or in collaboration with the College of Arts and Sciences. A recent discussion between the SAH interdisciplinary curriculum committee and Shawnalee Whitney, Chairperson of Communications, focused on how oral communications GER could better serve the School of Allied Health. If the content of a course or courses that fulfill the oral communications course is merely changed to include more of a health focus, the effect may do nothing to promote interdisciplinary education. However, if the teaching approach of the course were changed so that COH faculty taught a portion of the course, then there might be more of an interdisciplinary emphasis. For example, a 3-credit oral communications course could become a 2+2 course where oral communications faculty taught the 2-hours of lecture and the 2 hours of lab were taught by COH faculty. Shawnalee Whitney did not rule-out this option, however CAS or the GERC committee might not support it.

Another option would be to attempt to develop a COH course that qualifies as an oral communications GER. A beginning interviewing skills course may be logical target since many of the units within the college teach patient/client communication. However, this is likely to face opposition from CAS and Communications as all the existing oral communications GERs are in the Communications department.

The written communications tier I GER is another course that could be developed with the English department or independently. Again, opposition from CAS and English are likely if the COH were develop its own course as all existing tier I written communications courses are in the English department.

It may also be possible to develop tier II GERs within the College. The new tier II GERS could expand on the current social sciences tier 2 courses that are offered. In addition, it may be possible to develop a tier 2 natural sciences GER using BIOM (WWAMI) faculty. Interestingly, in the table of equivalent GERs from the other MAUs (page 88 of the Catalog), a Fairbanks Justice course (F300X) is listed as a humanities tier II GER (Ethics and Justice). Thus it may be possible to develop an interdisciplinary professional ethics course within the college that would meet the requirements for a tier II humanities GER. Such a proposal would likely face some opposition from CAS and the Philosophy department. However, this opposition could be muted if a cross-listed course was developed with the Philosophy department. It is my understanding that the School of Nursing is developing a nursing ethics course to replace the currently required Philosophy 302 (Biomedical Ethics) course. I am not certain why the School of Nursing is moving in this direction; this may fulfill the School of Nursing’s needs but it does not move the College in an interdisciplinary direction.

Given that all the bachelor’s degree programs within the College currently have a tier 3 GER (capstone) course, it makes little sense to create a new
interdisciplinary capstone course. To do so would be to create competition within the college, rather than attract additional students.

It may be possible, without making any changes to courses or curricula, to create advising plans for undergraduate double majors within the college. The double majors could include double Associates of Applied Sciences (AAS) degrees, achievement of Occupational Endorsement Certificate on the way to AAS or double BA/BS degrees. While these advising plans are not explicitly interdisciplinary, the outcome would be students who are dually trained. Similarly, dual degree programs at the graduate level could be created such as WWAMI (MD)/MPH.

The College of Health could create new certificate programs (occupational endorsements, post-baccalaureate certificates, graduate certificates) that are explicitly interdisciplinary. For example, the College of Health could explore the development of interdisciplinary minors in problem areas (e.g. domestic violence), populations (as in the existing gerontology and the proposed children’s mental health). The review of programs at UAA’s aspirational peer institutions revealed several examples of interdisciplinary degree programs. The disadvantage of developing new degree programs is the funding required as well as the long and involved approval process.

Less involved would be to develop courses around problem areas (e.g. cross-cultural practice, domestic violence, suicide, etc.) or practice knowledge (e.g. HIPAA, Blood-borne pathogens). This could be done as a modular approach to learning where different departments collaborate in developing shared curriculum modules.

One area to target may be existing courses that appear to have overlapping content. A quick reading of course titles in the catalog reveals several courses across academic units with similar vocabulary (e.g. infection control, radiography, pathology, pharmacology, microbiology, legal, ethics, practicum/internship/clerkship). Of course this similar vocabulary does not take into account course level or number of credits. Parallel content is more likely in two areas: research courses and cultural diversity courses. The following courses all provide introductory research content and none are cross-listed: HS 629, JUST 200, JUST 400, MEDT 401, NS 620, SWK 424, SWK 624. While the HS/SWK 628 Program Evaluation course is cross-listed, the HUMS 610 course is not. There are at least six courses related to cultural diversity within the college, and none are cross-listed: HUMS 321, MEDT 250, NS 423, NS 623, SWK 243, SWK 643. It is likely there are additional courses within the college that have parallel content, a more systematic examination of the curriculum will likely reveal the overlap.

As was discussed above, competency-based approaches to curricula are currently popular. Within the College of Health we could develop common competencies across programs. One way to begin the task of constructing an interdisciplinary competency based curriculum would be to compare student-
learning outcomes of programs and courses to see where there are similarities. Those similarities would then be used to develop competencies across programs.

It is unclear how the Biomedical (WWAMI) program fits into any effort around interdisciplinary education, since they have no undergraduate program and their focus is on teaching for the University of Washington Medical School students based in Alaska. The fit with interdisciplinary education is also unclear for the non-academic units of ICHS and CHD.

Teaching methods

Like other efforts to influence college teaching there must be an effort to train and support faculty in how to teach interdisciplinary courses. If a model of delivery is chosen that involves co-teaching or team-teaching, it will also be necessary to train and support faculty in these efforts. Faculty are likely students’ first role models for interdisciplinary teamwork (Hammick et al., 2007) and faculty attitudes can affect the delivery and outcome of courses. At least one study reported that faculty felt unprepared for interprofessional seminar discussions involving nursing, medical and dental students (Reeves, 2000).

The interdisciplinary curriculum or courses could be organized around pedagogical (andragogical) approaches such as problem-based learning or competency-based education.

Policy

Pfirman, Collins, Lowes, and Michaels(2005) point out that the system of rewards for faculty and departments needs to properly credit interdisciplinary work. This includes promotion and tenure processes as well as faculty workloads and departmental credit hour production.

There are currently no uniform policies on how workload credits are apportioned for co-taught or team-taught courses. Chairpersons and Directors have developed their own within-unit guidelines on how workload is apportioned. For co-teaching or team teaching to work, there likely have to be College or University policies. Co-teaching or team teaching may appear inefficient if two faculty members are given full workload credit for a course. However, full workload credit to each faculty member acknowledges the extra work in preparation and coordination required for co-teaching. The efficiencies achieved through co-teaching and team teaching may not be apparent using the current metrics of student credit hour production and workload. As Dr. Beth Ellen Davis (personal communication, September 6, 2012) pointed out in her recent presentation, teamwork may require additional coordination efforts on the part of some team members, which may appear inefficient. The efficiencies, she argued, accrue to the patient through better coordination and delivery of care. Similarly, at the University, the efficiencies of interdisciplinary education may be seen in student learning or even distally, long after a student has graduated.
A similar issue involves allocating student credit hour (SCH) production for cross-listed courses. Currently SCH is allocated to units according to the course section where the student registers. However, due to restrictions within Banner or student whims, students may not register in the section related to their major department. Furthermore, course fees, such as the professional fee associated with the MPH program, may be an impediment to students registering for cross-listed courses.

Possible funding sources

No new funding is expected to support interdisciplinary education efforts. Increases in student credit hour production and increased efficiencies in the use of faculty workloads may provide some financial support. It is prudent, however, to explore grant funding for the College of Health's interdisciplinary education efforts. However, before pursuing any outside funding, we need to have a clear plan of action.

The following are some possible funding sources.

- Dr. Patrick DeLeon (personal communication, September 18, 2012), during his recent visit, identified three sources of Federal funding for interdisciplinary education. The first are from the Health Resources and Services Administration (HRSA) (see below). The second source may be in the Department of Defense. As Dr. DeLeon stated, “this administration cares about military families.” The third are funds in the 2013 FY appropriations continuing resolution that are specifically targeted to Alaska and Hawaii under the category of developing institutions or community colleges. Dr. DeLeon made a point of saying that this appropriation has been increased from past years. He suggested with discuss this appropriation with our Congressional delegation to see how the money can be leveraged for our purposes. In searching through the Senate Committee on Appropriations continuing resolution for the Department of Education, I found the following,

  “Strengthening Alaska Native and Native Hawaiian-Serving Institutions.— The Committee recommends $12,859,000 for this program. In addition to the Committee-recommended level, these institutions receive $15,000,000 of mandatory funding through the HCERA in each fiscal year through 2019. The purpose of this program is to improve and expand the capacity of institutions serving Alaska Native and Native Hawaiian students and low-income individuals. Funds may be used to plan, develop, and implement activities that encourage faculty and curriculum development, better fund administrative management, renovation, and improvement of educational facilities, enhanced student services, the purchase of library and other educational materials, and education or counseling services designed to improve the financial and economic literacy of students or their families. Strengthening Native American-Serving Nontribal Institutions.— The Committee recommends $3,119,000 for this program, which serves institutions that enroll at least 10 percent Native American students and at
least 50 percent low-income students. In addition to the Committee-recommended level, these institutions receive $5,000,000 of mandatory funding through the HCERA in each fiscal year through 2019 to help institutions plan, develop, and implement activities that encourage faculty and curriculum development, better fund administrative management, renovation, and improvement of educational facilities, enhanced student services, and the purchase of library and other educational materials.” (page 195)

- Health Resources and Services Administration (HRSA). Four foundations have donated money and worked with HRSA to establish a new national center for interprofessional education and collaborative practice located at the University of Minnesota. It is unknown whether there will be future solicitations in this area.

- Fund for the Improvement of Post-Secondary Education (FIPSE). No current solicitations appear to be targeted to interdisciplinary education.

- National Science Foundation (IGERT? Grants). UAF has two of these grants. One is “Global-Local Interactions: Resilience and Adaption of Social-Ecological Systems in a Rapidly Changing North.” Also examine NSF solicitations from the DGE (Graduate Education) and DUE (Undergraduate Education)

- Spencer Foundation (deadlines October 1 & November 19). The Spencer Foundation supports research not programs, thus, they could be a source for evaluation of interdisciplinary education.

- The Josiah Macy foundation has as one of its five priority areas “interprofessional education and teamwork.” Since 2008 the foundation has funded 27 different institutions in this priority area. The foundation awards two types of grants: board grants and presidential grants. Board grants are one to three years in duration, are awarded at three times a year, and can be for several hundred thousand dollars. Presidential grants are awarded at any time, are one year in duration, and are limited to a maximum of $35,000. See

Useful Resources
In addition to the resources listed above, the following may be further sources of information on interdisciplinary education.

- The Center for Innovation in Interprofessional Education at University of California San Francisco (https://saa.ucsf.edu/saa-departments/interprofessional). They have their own internal grant program that informed our RFP solicitation.

- Centre for the Advancement of Interprofessional Education a membership organization and think tank in the United Kingdom (http://www.caipe.org.uk/). The website has many links to publications, both
peer reviewed and grey literature. The organization sponsors conferences related to interprofessional education and practice.

- Journal of Interprofessional Care. Available in full-text from the Consortium Library.

- Journal of Interprofessional Education. This journal does not appear to be available in full-text.

References


