Sharon Dobie, MD, MCP Amanda Kost, MD David Evans, MD Jaime Fitch Audrey Lew

Underserved Pathway Annual Report September, 2015

Sharon Dobie, David Evans, Amanda Kost, Leticia Reason, Jaime Fitch, Toni Moe, Audrey Lew

Summary

The Underserved Pathway (UP) is entering its ninth year with students and continues to expand its offerings and its participants. Notable landmarks and events for the 2014-2015 academic year include:

- 1. 47 students graduated in 2015 with certificates in the UP. Another 15 graduating students participated in the UP, but did not complete all requirements for a certificate.
- 2. Since its inception, 198 students have completed the Underserved Pathway (Figure 1).
- 3. 246 were enrolled in the UP in the 2014-15 year.
- 4. UP students continue to choose primary care residencies at higher percentages than students who do not participate in the UP (Table 1).
- 5. The UP team continues to work with the leadership in the Curriculum Renewal Process. A variation of one module will be used within Immersion and content from other modules will potentially be incorporated into various blocks in the Foundation Phase. The UP will continue with these efforts and then begin to develop additional materials for more in depth exploration by the UP enrolled students.
- 6. The UP is working with the other three pathways to ensure coordination and to further develop proposals for wider dissemination of Pathway participation and offerings. By the end of the 2014-2015 academic year, it appears that the Pathways together will offer an elective program in one of the Intersessions in the Foundations Phase.
- 7. The UP team implemented new activities to test technologies to include regional campus participation when modules are taught in-person.
- 8. Three new modules were developed and two new modules are in development. A student and a community mentor continue to develop a new module hopefully to be piloted during the next academic year. Students and residents were involved in development of two modules.
- 9. All existing modules are revised annually for content accuracy, relevance, and functionality of web references and data sources.
- 10. All Targeted Rural Underserved Track (TRUST) Scholars participate in the UP. A total of 27 students were TRUST Scholars during 2014-15 and that number will increase to 29 for 2015-2016. The UP faculty work with TRUST continuity community leaders, TRUST Scholars, and the TRUST executive committee to develop web modules and programs that support the TRUST concept.



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We led discussions at four in-person sessions some specifically for TRUST Scholars and some for both TRUST Scholars and other UP students. At one, we attempted to include, by phone, students at another campus. The faculty from both TRUST and the UP continue as part of a learning collaborative with community physicians and administrators to provide direction for curricular development.

- 11. Dissemination of the UP work continues. 1-7
- 12. The Dean of the School of Medicine provides funding for UP faculty. The Department of Family Medicine provides staff, administrative, web development and management support. Operational support is also provided by Family Medicine, and includes teaching sessions and other events such as the Pathways Informational Kickoff and Pathways Graduation. Other Family Medicine faculty participate in some teaching sessions. Initial funding for the UP was from HRSA Title VII. ²
- 13. The remarkable progress reported here is possible because of the dedication and time allocations of our faculty and staff. The strength of this program, as evidenced by outcomes, student enrollment numbers, and mentor and student evaluations is because there have been adequate faculty, staff, and administrative support. This support allows both a flexibility to individualize working with student interests and academic foci and the opportunity to function collaboratively within the team and with students; this leads to creative product that the students value. Students are encouraged to develop their interests with an expectation that their program has both experiential and robust didactic content. The team actively mentors this

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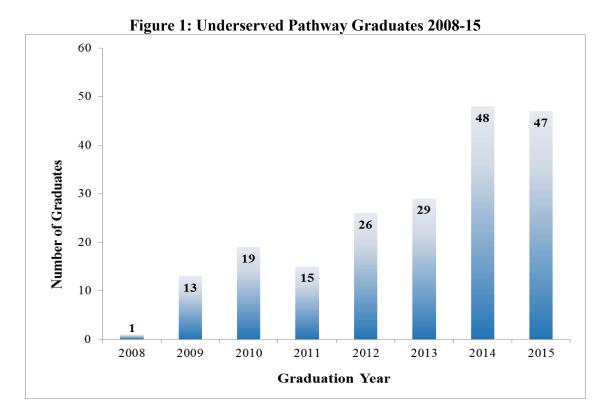
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^{6.}Kost A, Cawse-Lucas J, Evans D, Overstreet F, Dobie S. Family Medicine Extracurricular Experiences in Medical School and Choosing to Become a Family Physician. Academic Medicine. In press.

⁷ 54HP05261, Academic Administrative Unit in Primary Care, PI Drs Berg/Losh, Family Medicine, 09/01/05 - 08/31/08

process. Additionally, maintenance of the asynchronous learning platform requires significant and constant attention. Less faculty or staff support will negatively impact the ability of the program to serve the number of students enrolling and remain cutting-edge.



A. Current Student Participants

- 246 students were enrolled in the UP in the 2014-2015 academic year.
 - 54% of students attended or are attending their first year of medical school at a WWAMI region campus:

Alaska: 13 (5%) Wyoming: 5 (2%) Montana: 45 (18%) Idaho: 23 (9%)

Eastern WA (WSU Pullman (16) and Spokane (31)): 47 (19%)

Seattle: 113 (46%)

- Anticipated new enrollment during 2015-16 is approximately 50 students.
- 47 students graduated in May 2015, earning UP certificates. Another 15 from the



graduating class were enrolled but did not complete the requirements.

• The current 93 TRUST Scholars, including the 29 TRUST Scholars entering in Autumn 2015, are enrolled in the UP. The 29 E2015 TRUST Scholars completed the Public Health Epidemiology module as part of their TRUST First Summer Experience.

B. Mentors

- From 2006 to 2015, over 155 healthcare providers have participated as mentors.
- During 2014-15, 103 physicians mentored students in the UP. Of these, 40 are mentoring more than one student. UP mentors are physicians in the community, the student's college mentor, preceptors, or other physicians working with underserved populations. They practice in all five states and are both rural and urban.

C. Assessment

Outcome measures

Underserved Pathway graduates select residencies in many specialties. The majority, however, continue to enter primary care residencies (Table 1). Within the next few years, using American Medical Association Masterfile data, we will follow our graduates into practice to evaluate in what settings and communities they are beginning to practice.

Table 1: Residency Choice of Pathway Graduates 2008 -2015

Year	2008	2009	2010	2011	2012	2013	2014	2015	Total	Speci alty
Specialty	(n)	(n)								
Family Medicine	1	5	6	5	7	9	11	14	58	29.3
Pediatrics	0	2	5	2	3	5	8	6	31	15.7
Primary Care IM	0	1	1	1	3	0	7	6	19	9.6
Internal Medicine	0	1	2	1	4	6	2	6	22	11.1
Ob-Gyn	0	1	2	2	3	1	4	4	17	8.6
Surgery	0	1	1	1	2	4	3	4	16	8.1
Other	0	2	2	3	4	4	13	7	35	17.7
Total	1	13	19	15	26	29	48	47	198	100.0
Primary Care Total (FM, Peds, PCIM)	1	8	12	8	13	14	26	26	108	54.5

Department of Family Medicine Medical Student Education Section University of Washington E304 Magnuson Health Sciences Building 206.543.9425



The match rate to primary care specialties (Family Medicine, Pediatrics, or Primary Care Internal Medicine) was 54.5% for all students completing the Underserved Pathway, compared with 30.6% of the UWSOM graduating students from 2008-2015 who did not complete the UP (Table 2). The individual UP match rates to Family Medicine, Pediatrics, and Primary Care Internal Medicine were all higher for UP graduates than for other students matching in each of these specialties. Further match analyses are planned, including whether there is a relationship between UP participation and selecting a residency with an underserved focus.

Table 2: Percent of Graduating Students Matching in Primary Care Residencies, UP Graduates Compared With Other Graduates, 2008-2015;

Residency match	% of UP Graduates (N=198)	% of Graduates not completing UP (N=1434)			
Family Medicine	29.3 (58)	13.1 (188)			
Pediatrics	15.7 (31)	10.7 (154)			
Primary Care Internal Medicine	9.6 (19)	6.8 (97)			
Primary Care Totals	54.5 (108)	30.6 (439)			

Evaluations

Evaluation data from students exists from three sources. First, UP students complete an end-of-the-year survey in June. Second, each student completing each module is asked to complete an evaluation. Third, participants in the in-person sessions complete an evaluation. Together these sources provide information about the various components of the UP. Evaluation from mentors is both formal with an end-of-year survey and informal through student contact with faculty and staff.

Student Evaluations

a. Underserved Pathway Overall

In addition to the measures that formally evaluate the pathway, student participation levels are a measure of the value to students and they continue to participate in the UP in increasing numbers.

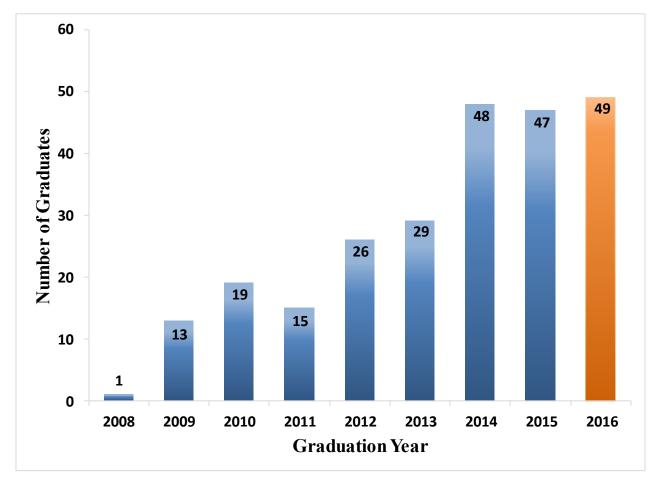


Figure 1.1: Actual and Anticipated Underserved Pathway Graduates 2008-16

The end-of-the-year survey is distributed to all UP enrolled students in all years. This academic year it was sent to 242 students and had 65 responses (26.9%), an increase over last year.

Consistent with responses from prior years, there is no single value or need reported by students and their comments cluster around several themes:

- The UP provides a community and a scaffold for creating a personalized curriculum that supports and strengthens interest.
 - "It does two things, it provides rural education, and it gives students a home."
 - "It's an indicator that the school values this topic enough to give it a pathway."
 - It gives a "feeling of community and support for wanting to work with the



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undeserved, not always an easy path to take."

- "It has broadened my educational experience and helped shaped the plans for my future career. I will be doing an MPH next year, which is in part because of my experiences in the Underserved Pathway. It has opened my eyes to problems of health equity in our community. I recommend the Underserved Pathway to any medical student that has an interest in social justice."
- The curriculum provides a foundation of knowledge and resources.
 - "Exposure is always great. Workshops or lectures that exposed you more to the social factors playing into peoples lives is always appreciated."
 - "The rotations, III, etc I would have done anyway so the extra benefit I got was from doing the modules. It was important to put the experiences I was having in context with didactics."
 - Although not administered by the UP, non-clinical electives were mentioned by name multiple times, including African American Health Disparities, Homeless Adolescents, Rural Health, Health Equity and Community Organizing.
- Mentorship is important.
 - "I have appreciated the strong mentorship and guidance I have been given through this pathway. Hope that I can do what I want to do after this is all over!"
 - "Mentorship with a physician who shares my common interests who is not involved in evaluating my performance in any way."
 - "Without my mentor and these reminders through various modules and talks, I
 think I would have easily forgotten (frighteningly so) what got me on the path to
 medicine in the first place."
- The in-person modules are valued highly
 - "More in-person module opportunities would be great! Also, maybe one talk a
 year by doctors in the field on how they make their work sustainable and how not
 to lose sight of goals in residency."
 - "A required in-person non-clinical course that creates a common dialogue between the students in the pathway, building relationships with our future colleagues to better combat issues of systemic inequality."
- More service learning opportunities are needed



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- A course on building a community service project
- I think more opportunities for service learning would be great ways for lots of students to learn about underserved populations in person.
- Additional service activities, more underserved clinical rotations.

b. Mentorship: Value and Challenges

In past student surveys, about two thirds of the students have found mentorship to be valuable. This year, three quarters of the respondents agreed or strongly agreed that the mentor relationship was meaningful. The increase in satisfaction with mentors may be for several reasons. First, members of the UP team individually spend time with students to recommend mentors who share the student's interests, hopefully providing connection that facilitates longitudinal contact. Second, Mentor and Student memos are distributed quarterly; these memos provide both mentors and students with more ideas for conversations. Included are lists of questions to ask students. Additionally mentors are invited to events. Both of these changes were suggestions from prior students. The UP wants mentorship to be an important experience for more students and recognizes the difficulties inherent in multi-state education.

c. Web-based Curriculum

In the end-of-the-year survey, students were asked if the modules were relevant and helpful and to rate the level of detail. 73% agreed or strongly agreed that the modules were relevant and 17% were neutral. 76% rated the difficulty as "just right" and 24% said they were too detailed. No one thought they were "far too simple," "too simple," or "far too detailed." Many comments highlighted the enjoyment and benefit from the "in-person" module sessions that are held at least quarterly.

During the 2014-15 academic year, 399 modules were completed and there were 281 evaluations, for a response rate of 70%. All students must complete "Who are the Underserved?" and all TRUST Scholars also complete "Public Health Epidemiology." The popularity of the each module can be seen in Figure 2. Students are asked four questions in addition to being asked for suggestions for improvement. Ninety-two percent said the modules contribute to their knowledge about the stated topic. Ninety-five percent said the module was effective in communicating the information. Eighty-five percent said the module was very or extremely likely to influence future work. Only 4% said that the modules were somewhat or very discouraging to interest in working with the underserved. (Figure 3)

In addition to comments acknowledging the content and delivery of the modules, there were a number of suggestions:

- More in-person sessions
- Additional modules and new or additional topics



- Increasing access of in-person modules to the region
- Continue to update material in the modules

Figure 2: Number of Students Completing Each Underserved Pathway Module: 2014-15

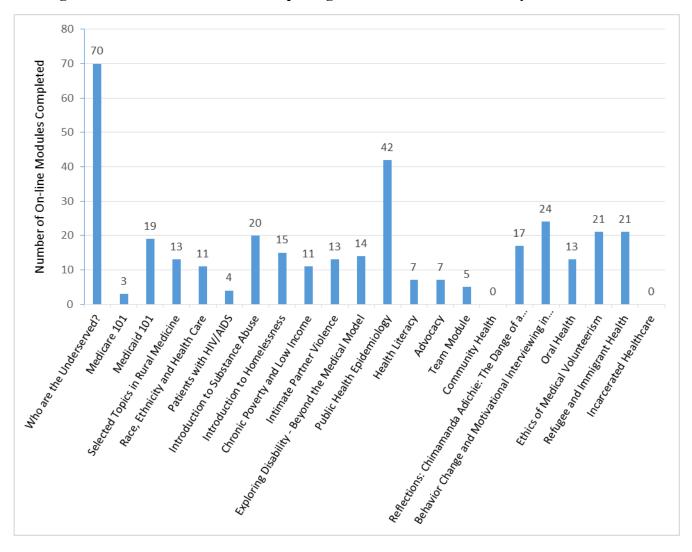
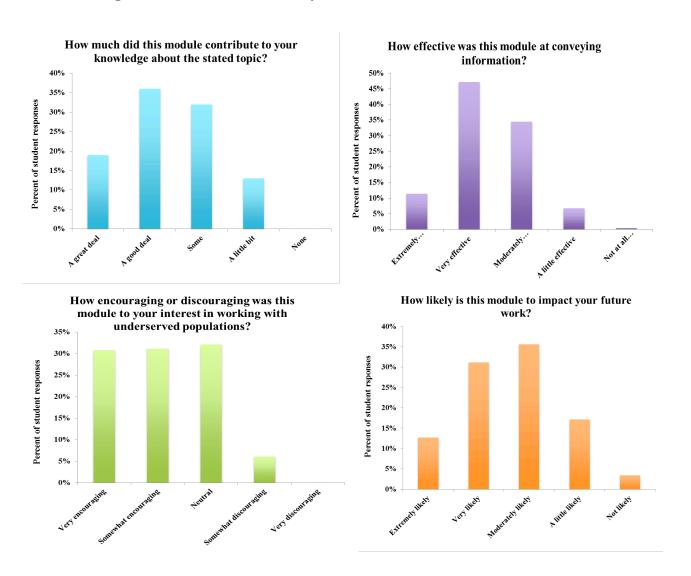


Figure 3: Underserved Pathway Total Module Evaluation Results: 2013-14



b. In-Person Sessions

Four in-person sessions were held for UP and TRUST students: Advocacy (in Seattle and at the TRUST Leadership Retreat), Disability, and Rural Health.

For the Disability session we invited students on all campuses. Only one campus participated; it was over the phone and the participating students and the facilitators did not find it to be successful for them. Additionally one in-person session was presented at Family Medicine Grand Rounds in Seattle. It was a pilot having three sites and a facilitator at each site, as a way to trial what we hope for future linking of campuses. The introduction of the presentation on Bias was presented to all three sites



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simultaneously via videocam. Then with the camera off, all three sites had individual interactive time and the return to a large group, again via video cam, closed the session.

All sessions continue to receive high ratings for both content and process. The students value getting together and the interactive nature of the sessions.

Of 75 responding participants, 89% said the module contributed to their knowledge on the topic, with 50% saying the module contributed "a good deal" or "greatly." 51% said the module was "very effective" or "extremely effective" in conveying the material and 44% said it was moderately effective. Only one student said the module was unlikely to impact future work, and 82% said the module was either "somewhat encouraging" (47%) or "very encouraging" (35%) to their interest in working with underserved populations.

Specifically, students value the content and the presentation of tangible skills. The TRUST students in particular seem to routinely comment that it is useful to come together as a group. Most suggested more time for the session; a minority asked the sessions be shorter. Other suggestions for improvement include having more time for discussions and having more sessions in person. Comments included:

- "Time to talk with peers in a facilitated session."
- "Learning more about the Americans with Disabilities Act."
- "Small group discussions with a big group discussion at the end."
- "The opportunity to break down conventions and stereotypes with a group of peers. Talking face-to-face with other students was neat."
- "The realization that even within disability, there is no societal 'normal." This is completely indidualistic for everyone and how they define their lives."
- "Watching all the videos; realizing what people have to say in their individual groups."
- "I liked the rotating instructors on different aspects of advocacy."
- "It was very valuable to discuss the steps to proceed with advocating for a cause. It was helpful to hear about the different options for advocating that fit...different strengths."
- "I liked the clear, distilled approach for approaching various media."
- "Great small group format. Helpful handouts, can uses later."
- "Challenge us more to redefine and reassess. Require a bit of reflection."
- "...no one wanted to talk. I don't know how to fix it, but it would be great if more conversation could be cultured."



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- "Smaller discussion groups."
- "I wish I had watched all the videos and that should be required."
- "Pass the phone to the person talking. Adobe worked great otherwise."
- "Have examples of letters, op eds etc."
- "Have the session right before lobby day. Send students straight to Lobby Day."

c. Community Service

UP Students have no difficulty completing community service; most are active in projects throughout their medical student careers. There continues to be requests for more activities in the WWAMI sites outside of Seattle and this is particularly important at this time.

d. WWAMI-Specific Issues

The UP team continues to seek ways to offer support to the other campuses, particularly ways to provide modules through distance learning or with support from their faculty.

Mentor Evaluations

Surveys were sent to 153 mentors; Sixty-one (39.9%) responded. When asked to select topics from a checklist that they discussed with students, more than 80% listed the following topics: what do to summer after first year, electives and pre clinical clerkships, specialty interest, service learning, clerkship planning an evaluation, studying for boards, and practice types. Interestingly, 49% of the mentors mentioned talking with students about personal issues and 36% spoke with students about health care finance and policy.

When asked why they are UP mentors and given three free text spaces, mentors had significant similarities in their responses, with 66% saying it was to encourage students specifically to go into careers with the underserved, and often mentioning it as a pipeline activity. Another 41% mentioned the desire to teach, mentor, and give back and additionally 41% separately mentioned it was to share experiences and encourage students. 28% mentioned it is stimulating and enjoyable.

When asked what we can do better, Mentors note that they like the quarterly memos, and they would like even more direction on topics and ways to connect with students. They would like us to be clearer with students about expectations and for us to notify them if a student is dropping off the UP. They would like feedback on what students find helpful or less so and more education on the Mentor role.

C. Initiatives 2015-2016 and Looking Forward

Curriculum Renewal

The UP faculty, along with the other pathways, is working to have core concepts incorporated



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into the curriculum all students receive.

- 1. The team is developing two new Rural Health Modules for use within the region and has created a proposed UP/TRUST curriculum of in-person discussions that can provide a basis for quarterly sessions with TRUST Scholars and other UP students on regional campuses.
- 2. The Underserved Pathway will participate in the Immersion sessions that utilize one of the UP modules, "The Danger of a Single Story" TED talk by Chimamanda Ngozi Adichie.
- 3. Along with the other three Pathways, the UP will create an All Pathways offering for one of the Intersessions.

Student Enrollment and Correspondence

Correspondence sent to new and prospective UP students encourages their longitudinal connection to the pathway. The team continues to promote early enrollment and to better support students while they are in the pathway.

- 1. To encourage this longitudinal relationship with the UP, increasing the overall length of time a student is in the UP:
 - a. Each spring quarter the UP will engage with entering students at the spring Second Look Seminar for new students. (initiated 2014)
 - b. Each summer the UP will send all entering students electronic information about the Underserved Pathway. (initiated E14)
 - c. Each fall quarter the UP will attend the UW SoM Student Activities Fair and continue to have kickoff events with the other UW SoM Pathways.
- 2. To inspire students to get started on UP requirements as early as possible, immediately after they join the UP, the UP team developed and will continue to improve initial correspondence sent to students (initiated 2013-14).

Each UP welcome letter:

- a. Identifies at least 4 modules that may be of interest to the student based of the content of their UP application.
- b. Outlines the policy for UP mentorship, and if noted in student's application, also provides mentorship suggestions.

Module Development

With a focus on providing both content and activities that broaden the skills of our students, our module development and revisions focus on offering tangible tools and strategies that might work for health improvement in diverse communities and ones that will augment material in the new curriculum.

1. There are currently 22 modules. Annually they are revised for web link accessibility.



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Each module receives a more in-depth revision for relevancy, content, and resources every two-three years.

- 2. The UP will coordinate with all campuses to offer in-person modules at least three times a year on all campuses. These will be required for TRUST Scholars and all UP students invited.
- 3. The UP team continues to meet regularly with the TRUST team. With the learning collaborative of TRUST preceptors, the UP will continue to identify topics that the TRUST preceptors believe to be critical to educating future physicians to work with vulnerable rural populations. Our focus this year will be to support distance learning on all campuses for TRUST Scholars and faculty development to teach our modules.
- 4. The ability to develop new modules will be curtailed by decreases in faculty support.
- 5. New Modules completed 2014-15:
 - a. Volunteerism
 - b. Refugee Health
 - c. Health Care of Incarcerated

Web Modules can be accessed using at the following website: https://courses.washington.edu/fmocw/

Mentor Relations

Based on the evaluations by students and mentors, The UP team developed (and early in the 2015-16 academic year will be launching) the *Mentoring Guide* for mentors and students. Based on best practices, it provides tangible tips for building and sustaining a working mentoring relationship. The quarterly memos to mentors and to students continue to propose themes for conversations between them. We continue to invite Mentors to in-person events. Our Twitter feed continues.

Plans 2015-16

With the new curriculum overlapping with 3 years of students continuing on the old curriculum, schedules and where students are will be even more complex. Through the manual and the quarterly memos, the UP will guide UP Mentors and students as we all transition.

Service Learning

Students throughout the SOM are increasingly interested in participating in Service Learning. In general students find the most time to participate later in first year, throughout second year, and in fourth year, and if expanded, during the expanded years. With the new curriculum, each student will spend the entire pre clinical Foundations Phase in their home state and campus. Having options for service learning is important for all students, not just those in the UP. New projects were developed or are in development in Wyoming, Alaska, Idaho, and both Western and Eastern Washington. While it is beyond the role and capacity of the UP to develop opportunities, the UP remains active within the



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Service Learning Advisory Committee and the Inter-professional Service Learning Committee on the Seattle campus, in particular to help other campuses develop opportunities.

IT Development

With the support of the Department of Family Medicine, the UP continues to work on integrating into the newly established database. Other departmental IT priorities made completion of this not possible in the 2014-15 timeframe. The UP maintains links to SOM's Service Learning website, the TRUST site and other service sites. We continue to tweet interesting articles for mentors and students. The links initiated in 2014 for the student tracker continue to facilitate students' tracking of their progress.

The Underserved Pathway-TRUST Interface

The UP provides key components of the TRUST curriculum for TRUST Scholars. All students enrolled in TRUST (year one until graduation) are required to enroll in the UP. The UP Director serves on the TRUST Steering Committee and works closely with TRUST faculty to ensure that the UP meets the needs of TRUST Scholars.

As a select community of students within the UP, the TRUST Scholars have a curriculum with enhanced mentoring and more in-person learning sessions and journal clubs than is required of the non-TRUST UP students. With a goal to sustain TRUST Scholars' desires to choose careers with the underserved, the UP supports them as a community. The following components continue to integrate TRUST and the UP and the UP will be working to improve these offerings:

- 1. TRUST Scholars prior to E15 completed two rural health classes. A new TRUST program is a leadership retreat that has been held in Montana for rising second-year students. It was quite successful in Spring 2015 and the TRUST team envisions it being longer and in an Intersession before the first summer for the E15 students. The second rural health class content would be covered during that session. For the first rural health class, there may be a variety of options open to the campuses. To be certain that the material is available, the UP will develop two modules that can be taught in a variety of ways on each campus or completed during a visit to a student's TRUST site during the first two Intersessions.
- 2. As the new curriculum for the entire school takes shape, TRUST will need to work with its community and academic partners, including the UP, to design and modify requirements and offerings to best support and to provide the best education for the TRUST Scholars.
- 3. Each TRUST Scholar has a continuity community site with a specified physician mentor. The TRUST continuity mentor also serves as the UP mentor for each given student. The UP team solicits this agreement and works with the regional deans, mentors, and their students to encourage a meaningful longitudinal relationship, including return visits.
- 4. The UP/TRUST team hosts a welcome dinner for all TRUST Scholars when they arrive in Seattle. (In the 2015-16 academic year, this will include E15 students from Western



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Washington and there will also be second-year students from Eastern Washington, Wyoming, Montana, and Idaho)

5. TRUST Scholars of all years will continue to have two to three sessions per quarter (in-person or live/virtual) that will be a journal club, a career-relevant presentation, or a group session to complete a web-based module. These are hosted by the UP team in conjunction with TRUST and now with our regional faculty. For in-person modules, the UP will develop material and a faculty guide outlining a variety of ways faculty at Foundation Phase sites can present these materials.

The Underserved Pathway in Collaboration with other School of Medicine Pathways

Collaboration among the Pathways will focus on development of an Intersession, and on curriculum development to enhance material all students will now receive in the pathways. The UP team supports the continued existence of multiple pathways however. By having options and a heightened presence of pathways, elective offerings, and service learning and community engagement opportunities, students receive an important messages within the "hidden" curriculum: that these values matter, that our communities deserve better health, and that our students and we need to be part of the solutions.

Dissemination

- 1. Kost A, Benedict J, Andrilla CH, Osborn J, Dobie SA. Primary care residency choice and participation in an extracurricular longitudinal medical school program to promote practice with medically underserved populations. Academic Medicine.2014 Jan;89(1):162-8
- 2. El Rayess F, Evans DV, Ryan M, Nokes K. Training Students to Care for Underserved Populations: Aligning Mission, Values, and Vocation. Society of Teachers of Family Medicine, Annual Spring Conference, Lecture-Discussion, San Antonio, Texas, May 2014 (Presentation)
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- 5. Binienda J, Chadwell M, Conniff K, Cyr P, Hoffman M, Kost A, Minor S, Prunuske J, Williams M, WinklerPrins V. Engaging Today's Medical Student. Society of Teachers of Family Medicine, Conference on Medical Student Education, Nashville, Tennessee, Jan 30 Feb 2, 2014 (Presentation)
- 6. Kost A, Cawse-Lucas J, Evans D, Overstreet F, Dobie S. Family Medicine



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Extracurricular Experiences in Medical School and Choosing to Become a Family Physician. Family Medicine. In press.

- 7. Evans DV, KrasinB, Brown K, Kost A. Dobie S. Student perceptions about benefits from an extracurricular curriculum: Experience from the Underserved Pathway.draft rewrite in progress.
- 8. Kost A, Evans D, Reason L, Fitch J, Dobie S. Who are the Underserved? Submitted, revised and resubmitted to MedEd Portal. June 2015.