From Teeth to Toes, Interprofessional Education in Community Outreach Settings

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4 Health Professions

Pharmacy
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Dentistry
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Medicine
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Nursing
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OVERVIEW of SESSION

• Present the rationale for interprofessional education in community outreach settings
• Describe the development, implementation and evaluation of Teeth and Toes, Project Chance and other community outreach
• Review assessment tools and results
• Share challenges and barriers we encountered
• Discuss future directions
• Questions and Answer Session
4 Health Professions

- Pharmacy
- Dentistry
- Medicine
- Nursing
How does participation in service learning enrich the IPE learning experience?

Provides opportunities to:

• Further develop core attributes such as leadership/advocacy, empathy, and social accountability

• Transfer knowledge, skills and abilities from one learning environment to another

• Work in situations that at times, may be ambiguous, complex, and challenging
How does participation in service learning enrich the IPE learning experience?

Continued...

• Help students develop a better understanding of health disparities and moral and ethical issues that may arise

• Engage in reflection- openness, self-awareness, commitment to collaborative practice, and personal development
IPEC Core Competency Domains (2011)

1. Values/Ethics for Interprofessional Practice
2. Roles/Responsibilities
3. Interprofessional Communication
4. Teams and Teamwork

*2011 American Association of Colleges of Nursing, American Association of Colleges of Osteopathic Medicine, American Association of Colleges of Pharmacy, American Dental Education Association, Association of American Medical Colleges, and Association of Schools of Public Health.*
VE1. Place the interests of patients and populations at the center of interprofessional health care delivery.

VE3. Embrace the cultural diversity and individual differences that characterize patients, populations, and the health care team.

VE4. Respect the unique cultures, values, roles/responsibilities, and expertise of other health professions.
RR1. Communicate one’s roles and responsibilities clearly to patients, families, and other professionals

RR4. Explain the roles and responsibilities of other care providers and how the team works together to provide care.

RR7. Forge interdependent relationships with other professions to improve care and advance learning.
**CC4.** Listen actively, and encourage ideas and opinions of other team members.

**CC8.** Communicate consistently the importance of teamwork in patient-centered and community-focused care
Selected IPEC Competencies: Teams and Teamwork

**TT4.** Integrate knowledge & experience of other professions, to a specific care situation, to inform care decisions with respect to the patient

**TT7.** Share accountability with other professions, patients, and communities for outcomes relevant to prevention and health care

**TT8.** Reflect on individual and team performance for individual, as well as team, performance improvement

**TT9.** Use process improvement strategies to increase the effectiveness of interprofessional teamwork and team-based care.
Teeth and Toes Clinic
Dentistry, Medicine and Nursing
• Began in 1980, sponsored by the Department of Family Medicine

• Student initiated & directed

• Goal is to provide for underserved communities and to promote students’ interest in family medicine careers with vulnerable populations

• Offers quality leadership and service learning opportunities to health science students
2000  CHAP begins providing foot care at Mary’s Place Day Center in downtown Seattle, a program serving homeless women.

2005  Dental students start providing OHI at Mary’s Place shelter.

2006  Dental students start 45th Street Homeless Teens Dental Clinic.

2007  CHAP begins foot care in conjunction with longstanding CHAP dermatology clinic in the Downtown Emergency Service Center (DESC).

2011  Project Hope—Dental school begins Medical Teams International (MTI) dental van collaboration.

UW nursing students join UW medical students to deliver foot care to the homeless.
2012 UW nursing, medical and dental students pilot delivery of foot and oral health care at Teeth and Toes clinic at a women’s shelter with referral to MTI van as needed

- Students share their experience at the annual conference of Society of Teachers of Family Medicine

- Dental students make site visit to newest nursing and medical student foot care partnership at ROOTS (Rising Out Of the Shadows), a shelter for young adults in the University District and interprofessional learning begins
Development of IPE project

2013  Students give oral presentation on interprofessional service learning at the Society of Student-Run Free Clinics 2013 conference

Dental students start working at Union Gospel Mission (UGM) Dental Clinic

Health and Homelessness elective course started in the dental school

Teeth and Toes Clinic at Mary’s Place with availability of referral to UGM by medical, nursing and dental students
ROOTS project continues project development for foot care and oral health education, referrals to 45th Street Homeless Teens Clinic
Teeth and Toes Clinic

Oral Health Preventive Services
Dental students provide oral hygiene education, screenings, fluoride varnish application, referrals for dental care

Foot Care
Medical and nursing students work one-on-one with clients to provide foot examinations and foot care
Foot Care

Diabetes Neuropathy Screening

Callus Removal
Something in common?

• How could you facilitate the students learning from each other in a volunteer, service learning environment?
Collaboration on diabetes education

Foot Care

Oral Health Education, Screening

Diabetes questions

xx? xx?
Are your feet numb or tingling?

“Yes” answer may indicate neuropathy and a higher risk for diabetes.

Do you have a family history of diabetes?

“Yes” answer may indicate higher risk for diabetes.

Do you have dry mouth or need to take in liquids to swallow your food?

This may correlate with diabetes. Dry mouth is also caused by medications (as a side effect), by autoimmune disease and radiation treatment of the head and neck.
Are any of your teeth loose or have shifted position?
Do your gums bleed when you brush your teeth or eat?
Does pus come out of your gums when you press them with your fingers?

*If any answer(s) are "yes", these are possible signs of periodontal disease. The individual may have periodontal disease that is related to diabetes, made worse if the person uses tobacco. There is evidence that periodontitis may affect glycemic control, making it harder to control diabetes.*
The Huddle

Pre-session huddle at the ROOTS Shelter for Homeless Teens
Post-session huddle at the ROOTS Shelter for Homeless Teens
Project CHANCE
Dentistry, Medicine, Nursing, Pharmacy, Public Health, Social Work
Brief Outline of Project Steps

• Identify community partners and stakeholders
• Conduct a needs assessment
• Identify shared goals, activities, and components of program evaluation
• Identify what resources are available and what resources are needed, including plans for sustainability
• Collect data early to help improve the project
• PDSA Cycle
Project CHANCE
An Interprofessional Team Approach to Diabetes Care in a Seattle Underserved Community

1. Conduct a needs assessment of low- to no-income adults

2. Design and evaluate an educational intervention focusing on diabetes mellitus prevention & self-management for an underserved population

3. Build a sustainable interprofessional collaboration among health science students and providers at the University of Washington
   • Educate each other on the breadth and depth of each team member’s role in optimizing comprehensive patient care
   • Develop opportunities for future student participation through the course UCONJ 450: Health Care for the Medically Underserved
   • Participate in an interprofessional diabetes care service project designed to help patients at high-risk for complications and poor outcomes
Project CHANCE Communication Techniques that Enhanced Team Communication

- Website
- Google docs
- List-Serve
- Face-to Face Meetings
- Conference Calls
- Courses such as UCONJ 450, ORAL MED 651
- Just in time training
Example of Student Website Page for Client Resources
Examples of Community Educational Presentations
Developed by Interprofessional Student Workgroups
Collaboration on diabetes education and care

Use Project CHANCE teaching modules to train students for interprofessional diabetes education, screening and treatment

Diabetes questions cards

Project CHANCE presentations
Developing a Collaborative Team Approach: Student Perspectives on Lessons Learned

• Open communication between the students, faculty and clinic coordinators

• Regular meetings and conference calls

• Remain open-minded and flexible about the logistics of the project

• Use each individual’s unique skill set and talents to further opportunities for research (survey development, educational presentations, IRB application)
• Unite and conquer by spreading leadership opportunities and involvement among team members

• Discover and utilize each person’s individual skills beyond their health care background

• Unforeseen roadblocks are common: Be patient and persistent

• Interprofessional team projects are unique and valuable training for health sciences students
Assessment of Student Attitudes
Why assess?
## Assessment Components

<table>
<thead>
<tr>
<th>What is being assessed?</th>
<th>How?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logistics (what worked, what didn’t)</td>
<td>Debrief after event</td>
</tr>
<tr>
<td></td>
<td>Paper questionnaire</td>
</tr>
<tr>
<td>Student Attitudes, interprofessionalism, working with the homeless</td>
<td>Pre &amp; post test</td>
</tr>
<tr>
<td>Student Experience – Educational Value</td>
<td>Online post-experience survey</td>
</tr>
<tr>
<td>Student Reflection</td>
<td></td>
</tr>
<tr>
<td>Examples:</td>
<td>• Share interesting interprof. exper of event, why significant, reflect how might change interaction</td>
</tr>
<tr>
<td></td>
<td>• Share interesting oral health &amp; systemic issue</td>
</tr>
<tr>
<td></td>
<td>• Why significant?</td>
</tr>
<tr>
<td></td>
<td>• How use in future role as provider?</td>
</tr>
</tbody>
</table>
Overall, this outreach opportunity was extremely valuable to my health professional education.

<table>
<thead>
<tr>
<th></th>
<th>Means</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical/Nursing Students</td>
<td>1.60</td>
<td>.84</td>
</tr>
<tr>
<td>Dental Students</td>
<td>1.29</td>
<td>.47</td>
</tr>
</tbody>
</table>

(scale: 1 strongly agree to 5 strongly disagree)
### I feel that working with the other disciplines...

<table>
<thead>
<tr>
<th>Statement</th>
<th>Medicine/Nursing (n=10)</th>
<th>Dentistry (n=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I increased my <strong>understanding of how other disciplines</strong> provide care for patients.</td>
<td>1.40 (sd .52)</td>
<td>1.71 (sd .73)</td>
</tr>
<tr>
<td>I increased <strong>my ability to provide service</strong> and/or education to the patients I saw.</td>
<td>1.50 (sd .53)</td>
<td>1.57 (sd .51)</td>
</tr>
<tr>
<td>Feel it <strong>resulted in better care and education</strong> of the patients seen.</td>
<td>1.40 (sd .52)</td>
<td>1.50 (sd .52)</td>
</tr>
</tbody>
</table>

(scale: 1 strongly agree to 5 strongly disagree)
Qualitative Analysis

• Preliminary Thematic Analysis
  – Included only themes where at least 10% of respondents offered this view

• Interprofessional themes fit IPEC competencies
  – (VE3) embrace cultural diversity & individual differences that characterize patients, populations, & the health care team
  – (CC4) communicate the importance of teamwork in patient-centered care
  – (TT4) integrate knowledge & experience of other professions, to a specific care situation, to inform care decisions with respect to the patient
• Students recognize Policy needs
  – number of edentulous patients ...any out reach programs specifically for dentures
  
  – need to build up a well documented file for each patient [confidential informatics system]

  – Advocate for more widely available dental care. [medical]

  – Changes in our health care system are needed in order to provide better care to under-served populations....important for providers to take responsibility ...help those in need....has been such an eye opening experience for me
Students advocate social responsibility

- I am more aware of the lack of ability to pay for dental care and the lack of information for [patients] to receive a reduced pay dental care.

- I believe that everyone deserves equal treatment and should get full proper treatment.

- Increased interest in working with the homeless population...ideally to help them get out of homelessness.
Relevance of Interprofessional Collaboration

Interprofessional work & interactions
- *It is our responsibility as health care providers to work together to keep the body as a whole healthy.*
- *I want to focus on systemic health conditions*

Knowledge—sharing & gain
- *I would love to learn more about oral hygiene and how chronic illness negatively impact the quality of teeth. I once again recognized the value of communicating with other professions and being knowledgeable of the resources and expertise they can provide.*
- *When I am screening patients/clients for diabetes, I will be sure to include information about oral hygiene.*
Personal Development – communication skills with peers & patients

– *Instead of just telling the med/nursing students about what dental students were doing, I would have asked them to show me what they were doing on their end of things.*

– *Makes me a better listener*
**Additional Outcomes (on-site evaluations)**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Post Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>More knowledgeable about other health disciplines involved. (n=45)</td>
<td>2.07 (.78)</td>
</tr>
<tr>
<td>More prepared to work collaboratively with different health disciplines. (n=45)</td>
<td>1.78 (.82)</td>
</tr>
<tr>
<td>I have increased my commitment to advocate for patients similar to those I treated. (n=46)</td>
<td>1.37 (.65)</td>
</tr>
<tr>
<td>Feel more strongly to provide service to patients with limited financial resources is a professional responsibility (n=46)</td>
<td>1.37 (.65)</td>
</tr>
</tbody>
</table>

(scale: 1 strongly agree to 5 strongly disagree)
### Additional Outcomes

**Working with other disciplines....**

<table>
<thead>
<tr>
<th><strong>Outcome</strong></th>
<th><strong>Post Mean (SD)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased my understanding of how other disciplines provide care (n=46)</td>
<td>1.80 (.72)</td>
</tr>
<tr>
<td>Increased ability to provide service &amp;/or education to patients (N=46)</td>
<td>1.63 (.77)</td>
</tr>
<tr>
<td>Resulted in better care &amp; education for patients (n=46)</td>
<td>1.48 (.62)</td>
</tr>
</tbody>
</table>

*(scale: 1 strongly agree to 5 strongly disagree)*
<table>
<thead>
<tr>
<th></th>
<th>Post Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am more knowledgeable about the health needs of this patient</td>
<td>1.73 (.80)</td>
</tr>
<tr>
<td>population (only asked at 1\textsuperscript{st} event; n=20)</td>
<td></td>
</tr>
<tr>
<td>I am more knowledgeable about the general health needs of</td>
<td>1.88 (.59)</td>
</tr>
<tr>
<td>homeless patients (2\textsuperscript{nd} and 3\textsuperscript{rd}</td>
<td></td>
</tr>
<tr>
<td>events; n=26)</td>
<td></td>
</tr>
<tr>
<td>I am more knowledgeable about major oral health issues of</td>
<td>1.88 (.82)</td>
</tr>
<tr>
<td>homeless patients (2\textsuperscript{nd} &amp; 3\textsuperscript{rd}</td>
<td></td>
</tr>
<tr>
<td>events; n=26)</td>
<td></td>
</tr>
</tbody>
</table>

(scale: 1 strongly agree to 5 strongly disagree)
**Additional Outcomes**
*(limited events)*

<table>
<thead>
<tr>
<th></th>
<th>Post Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared learning with students from other disciplines will increase my ability to understand clinical problems (2 &amp; 3\textsuperscript{rd} events; n=26)</td>
<td>1.35 (.56)</td>
</tr>
<tr>
<td>Working with students from other disciplines will help me become a more effective member of the health care team (2\textsuperscript{nd} &amp; 3\textsuperscript{rd} events; n=26)</td>
<td>1.19 (.40)</td>
</tr>
</tbody>
</table>

*(scale: 1 strongly agree to 5 strongly disagree)*
Challenges

1. Alignment of goals for teaching and service (or are we on the same page?)
2. Communication
3. Expectations
4. Rules and liability, affiliation agreements
5. Schedules
6. Facilities
7. Preceptor, student recruitment
1. Alignment of goals for teaching, service

- Teaching
- Patient care
- Population health
- Learning assessment
- Evaluation of program development
2. and 3. Communication, community partner expectations

Are we meeting their needs?

- Communication protocol for scheduling
- On-site orientation to facilities, protocols, rules and regulation, etiquette
- Communication with staff members
- They want access to care for their clients, they are advocates for their clients
4. Institutional rules and liability, affiliation agreements

• Need for faculty preceptors

• Approval by respective institutions or interprofessional committee (e.g. individual schools, UW Health Sciences Interprofessional Service Learning Committee)

• Liability coverage - adverse outcomes, sharps injuries

• Liability coverage of the community partner
5. Student, community partner schedules not aligned

- Dental students not available weekdays
- Multi-professional orientations cannot be scheduled easily, require time
- Community partner sites may not be open when students are available
- Communication protocols need to be established
- Flow-of-service algorithms for students, preceptor, community must be clearly presented
6. Facilities

- Space
- Utilities
- Equipment usage
- Access, safety
- Scheduling
Access to Dental Chairs

Union Gospel Dental Clinic

45th Homeless Teens Clinic

Medical Teams International Dental Van
7. Faculty preceptor, student recruitment

Volunteerism is a major factor.

Funding, other support
  – Faculty release time
  – Student support
  – Staff support
  – Supplies
Summary

- Our work has been primarily on education of students and delivery of care to underserved populations

- Work still needs to be done on clinical outcomes (e.g., identification of disease, referrals and followup, better self-management of chronic disease, healthy choices)

- Work still to be done on patient satisfaction, knowledge gained
Future Directions for Service Learning IPE

• Curricular integration
• Continuous development of the model of IPE
• Opportunities for shared problem-solving
• Advocacy development e.g. health-related policy at local, state and national level
• Opportunities for experiential and structured education about social determinants of health
• Interprofessionalism
• Enhanced communication and information systems
• Development of new pedagogic tools e.g. narrative medicine
New Program Worksheet for CHAP Projects

By Sharon Dobie, M.D.; Connie Huffine and Caroline Lanza, M.S.W.

This worksheet is intended to aid you as you consider a new project with CHAP. It is both a discussion guide and a reporting tool. Listed below are categories that should be considered as a question or group of questions for your group to answer. Discuss each area, develop strategies and activities and aim for consensus. Use the worksheet to record your group's thoughts and to report back to your team. It does not cover everything, but will serve to assist you in considering key areas.

1. **Proposed Project Description:**
   a. What is your purpose?
   b. What is your vision?
2. Needs/Assets Assessment:
   a. What methods and data should be considered to document needs/assets your project will work to address?
   
   b. Describe the tools you will use to assess community needs/assets.
   
   c. Describe the community members and resources you will consult to gather this information.
   
   d. What is the nature and extent of the community need/service gap for the proposed project?
   
   e. What assets or resources are available in the community that might be mobilized to help address this need/service gap?
3. **Visioning your goals**
   a. After working through the needs/assets assessment, describe the service gap that will be well addressed by this project.
   b. What is your vision now?

4. **Rationale:** (Briefly describe why you want to do this project.)

5. **Objectives:** (Consider desirable outcomes for the community, patients, organizations and you as students)
6. **Potential Players:** (Who might be partners, beneficiaries, allies in this program? Consider the community, University, and elsewhere.)

7. **Organizational Tasks:** (What should be the division of labor? Who needs to do what to develop the program? What activities are needed first?)

8. **Promotion:** (How can the program be marketed? How are potential players, supporters, patients, etc. made aware of the program to achieve the desired level of participation? Consider the objectives above.)
9. **Training:** (What are the training needs? Consider short-term and long-term needs and for whom. How should this take place?)

10. **Maintenance:** (How is a project turned into a program? What is required so that the program will survive and prosper over at least 3 years?)

11. **Evaluation:** (What should be measures of program effectiveness and efficiency? How should these be developed? Who should be responsible for implementing the evaluation? How might results be utilized?)
12. **Program Resources:** (Given the program description, objectives, tasks, etc, what resources are needed? Consider resources in a broad context that may include money, staff, space, volunteers, food, etc. What are potential sources of resources and how might these sources be secured?)

13. **Timeline:** (In general terms, what needs to happen when and who should be involved?)

14. **Other Issues:** (What are concerns that were not addressed above? What might be obstacles to implementing the idea?)
How will we know that we are making a difference? (“Triple Aim”)

• Better care for individuals (quality, access, care experience and care coordination)

• Better health for populations (disease prevention, wellness, reduction of disparities)

• Better utilization of health resources, (more efficient, lower costs, reduced ER visits, hospitalizations)

*Innovation Practice Evaluation Plan (CMS Center for Medicare and Medicaid Innovation)
Thank You!