



# CREATING PIPELINES TO RURAL MAINE TO ADDRESS HEALTHCARE SHORTAGES

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## Introduction

- According to the 2010 US Census Maine is the most rural state in the United States
- Maine's healthcare workforce demand is expected to increase as its population continues to age
- Innovative solutions to bolster the healthcare pipeline to rural and underserved population are needed to address the healthcare workforce shortage
- The University of New England's (UNE) Center for Excellence in Health Innovation (CEHI) innovates in the nexus of healthcare transformation, public health, and education
- The CEHI developed the Rural Health Intensive (RHI), an interprofessional program aimed at expanding clinical learning opportunities in rural settings for healthcare students to increase interest in rural medicine
- This program was piloted May 23rd – 27th 2016 in Northern Maine and again March 12<sup>th</sup> – 16<sup>th</sup> 2017 in Western Maine. Both immersions have included 15 students with approximately equal representation from UNE's:
  - College of Osteopathic Medicine;
  - College of Pharmacy;
  - College of Dental Medicine; or
  - Accelerated Bachelors of Science in Nursing Program
- Students completed pre- and post-surveys to measure changes in competencies and practice intentions and all students participated in a group debriefing/focus group to gather lessons learned and suggestions for continuous quality improvement



## Student Goals and Our Hypothesis

- Accurately define rural healthcare
- Identify the role of public health and healthcare in a rural setting
- Understand the challenges, needs, and strengths of a rural community from a systems approach
- Identify the values, skills, and competencies required to work in rural health
- Evaluate personal interest in pursuing rural healthcare career

**Hypothesis: If graduate health care students are immersed in the culture of rural healthcare they will be more likely to practice in rural areas**

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## Experiences

A.



B.



C.



D.



E.



F.



**Student experiences:** Numerous sites are visited during the immersion and activities are completed in interprofessional teams. Sites included a rural hospital, local elementary school, senior center, and Amish-centered health clinic to name a few. **A)** Students perform an 8 hour clinical obstructed airway training at The Aroostook Medical Center; **B)** Students and preceptors join a local TV station for a morning news broadcast to discuss their experiences in Northern Maine; **C)** Students spend an afternoon in a community pharmacy; **D)** Students tour Franklin Memorial Hospital; **E)** Students snowshoe on a lake after a Nor'easter; **F)** Students and preceptors participate in an interactive discussion on substance misuse and its effects on community health.

### Student Quotes:

*"This experience will undoubtedly influence my health care practice in the future."*

*"Interacting with others in an interdisciplinary setting was a fantastic experience. Discussion about healthcare and the art of medicine helped put things into perspective."*

*"This experience changed my mind and helped me realize that practicing in a rural community gives you the opportunity to bring about positive change in that community that you would not otherwise get."*

## Outcomes

**Table 1. Ratings of RHI programmatic components (Northern/Western)**

| Answer Options  | Below average | Average | Above average | Wicked good! | Rating Average |
|---|---------------|---------|---------------|--------------|----------------|
| Coordination (logistics)  | 0/0           | 3/0     | 3/6           | 9/6          | 3.4/3.5        |
| Facilitation discussion sessions  | 0/0           | 4/2     | 7/4           | 4/6          | 3.00/3.33      |
| Content (balance between professions)                                       | 1/0           | 5/0     | 6/4           | 2/7          | 2.64/3.64      |
| Format (balance between in-class presentations, discussions, and exercises) | 1/0           | 5/2     | 4/3           | 5/7          | 2.87/3.42      |
| Leadership of the trip  | 0/0           | 0/0     | 2/3           | 13/9         | 3.87/3.75      |
| Overall facilitation of the trip  | 0/0           | 1/0     | 3/3           | 11/9         | 3.67/3.75      |

**Table 2. Ratings of RHI Learning Objectives (Northern/Western)**

| Answer Options  | Strongly disagree | Disagree | Agree | Strongly agree | Rating Average |
|---|-------------------|----------|-------|----------------|----------------|
| Define rural health   | 0/0               | 0/0      | 6/5   | 9/7            | 3.60/3.58      |
| Describe the challenges and strengths of rural communities, healthcare, and public health | 0/0               | 0/0      | 2/6   | 13/6           | 3.87/3.5       |
| Assess the needs and strengths of a rural community                                       | 0/0               | 1/3      | 1/4   | 13/5           | 3.80/3.17      |
| Identify essential partners to build a system to ensure health in a rural community       | 0/0               | 0/3      | 4/4   | 10/5           | 3.71/3.17      |
| Identify the values, skills, and competencies required for working in rural health        | 0/0               | 0/1      | 6/4   | 8/7            | 3.57/3.5       |
| Describe the benefits and strategies for team-based care in a rural community             | 0/0               | 0/0      | 3/6   | 11/6           | 3.79/3.5       |

**Table 3. Level of interest in future rural or underserved rotations by health profession (Northern/Western)**

| Profession | Answer Options   | Very likely/Likely |      | Not sure |      | Not likely/Very unlikely |      |
|------------|--|--------------------|------|----------|------|--------------------------|------|
|            |  | Pre                | Post | Pre      | Post | Pre                      | Post |
| Medicine   | 3rd or 4th year elective rural area                          | 4/6                | 5/5  | 2/1      | 1/1  | 0/0                      | 0/0  |
|            | 3rd or 4th year elective in a non-rural underserved location | 4/7                | 6/5  | 2/0      | 0/1  | 0/0                      | 0/0  |
| Pharmacy   | APPE in a rural area   | 5                  | 5    | 0        | 0    | 0                        | 0    |
|            | APPE in a non-rural underserved location                     | 4                  | 4    | 0        | 0    | 1                        | 1    |
| Dental     | Rotation in a rural area                                     | 4                  | 4    | 0        | 0    | 0                        | 0    |
|            | Rotation a non-rural underserved location                    | 3                  | 2    | 0        | 0    | 1                        | 1    |
| Nursing    | A rotation in a rural area                                   | 9                  | 6    | 0        | 0    | 0                        | 0    |
|            | A rotation in a non-rural underserved area                   | 9                  | 6    | 0        | 0    | 0                        | 0    |

## Conclusion

- Evaluation has showed that this is a valuable experience for students and has fueled discussions and plans to make this an ongoing opportunity
- Planning is underway to expand the RHI to other communities in Midcoast Maine
- Future immersions will include other graduate healthcare professions at UNE
- Monitoring of students with follow-up surveys to track the location of clerkships, practicums, residencies, and practice will determine if this experience increased likelihood of practicing in rural areas

