Rural Case Study Report

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Rural Health Workforce Development Program: Giving Medical Students the Opportunity to Experience Practicing in Rural Maine

Introduction

Maine lags behind nearly every other state in the country in the number of medical students,[1] in part because there is only one osteopathic medical school located within the state. The Maine Medical Center (MMC), a large teaching hospital in Portland, Maine, recently began a new training program to address this gap in the health workforce pipeline. Funding through the Department of Health and Human Services, Health Resources and Services Administration, Office of Rural Health Policy's Rural Health Workforce Development Program has assisted MMC in partnering with four rural hospitals to provide opportunities for medical students to get a taste for practicing in small communities in the state. In October 2011, two NORC researchers traveled to Maine and conducted a series of interviews and focus groups to learn more about this innovative program.

LIC students and their preceptors at Franklin Community Health Network.

Photo: James Daigle

How is the Program Structured?

As part of its efforts to increase the number of physicians trained in Maine, in 2008 the Maine Medical Center (MMC) and the Tufts University School of Medicine formed a partnership to create an allopathic medical school program. Tufts expanded its enrollment by 36 slots called the Maine Track. There is a separate admissions process for the Maine Track program, whose mission is to "recruit and retain Maine students to be Maine doctors." In May 2011, 18 of the 36 Maine Track students began a nine-month Longitudinal Integrated Curriculum (LIC). Ten of these students were placed at four rural hospitals in Maine.

The LIC program differs from a "traditional" or block training program in which students cycle through different disciplines, spending several weeks training in one area before moving to the next. Instead, LIC students complete six core clerkship requirements—pediatrics, OB/GYN, psychology, internal medicine, family medicine, and surgery—in parallel over a nine-month period. At the beginning of the program, students are assigned a panel of patients whom they follow throughout the nine months. The trainees might therefore see the same patient during outpatient visits, consultations with specialists, and hospital admissions. Students are also matched with

preceptors in six different disciplines and in the course of one week students are scheduled for half-day clinics with each.

To supplement their patient encounters, students participate in half-day "integrative" sessions each week. Using web-conferencing technology, students from each of the hospitals join together for case presentations, lectures, or other activities (e.g., a journal club or portfolio review). Every six weeks, all of the students travel to MMC to sit for one of the shelf exams that are a standard part of the third-year medical school curriculum.

All of the communities have a site director to help coordinate the program. The network's site directors convene monthly by web conference to discuss the program's progress and to troubleshoot any challenges. In addition to providing the site director and preceptors, each host hospital is responsible for securing housing for the trainees. In one of the communities, all four students live in a house adjacent to the hospital. Each trainee has his or her own apartment and at least one of the units is built to accommodate a family. The hospital provides students with internet access and—critical in Maine—snow-removal services, among other amenities. The communities have hosted various events to welcome the students to the area and students at one of the hospitals were greeted with letters written by the state senator. The trainees with whom we spoke mentioned having been invited to dinner in the homes of several of the providers and being introduced to their families. Cathy Cadigan, MD, the director of the network, described one site director who routinely drops off dinners for the students and invites them on hikes and other outings. Dr. Cadigan joked that the site director had become so close with the students that she might draw up adoption papers for her trainees.

What Is the Program's Impact?

While it is still too early to know whether the students who participate in this program will practice in rural communities, there are some positive indications about its role in the recruitment process. We spoke with a small group of trainees in one of the facilities—all of whom believed they had made the right decision to sign up for this program. They stressed that it is very helpful to have this opportunity to really experience living and working in a rural community for an extended period of time. One explained that it "opened my eyes" about the realities of working in a small community. Another said she would not have wanted to apply for a residency program in rural Maine without having first had this opportunity to get a sense of what it is like to practice there. The students noted that after this stint in rural Maine if they did choose to come back it would not be a "shock" and it would be easier to "acclimate" to the setting.

One of the students was particularly happy with his time in the program thus far and explained that the LIC "made me realize this is the type of medicine I want to do—long-term and patient-focused." The individual explained that he enjoyed the work environment, the fact that there is an opportunity to get to know patients well and follow them over time, and the sense of "contributing to care in a meaningful way."

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>
> *– student participating in LIC program*

The site directors and preceptors have also observed that the students are developing a "sense of ownership" about their patients; they noted that students will refer to "my patients." The preceptors also perceive that the program is well-received by patients. They relayed anecdotes in which patients have asked after students who were unable to attend an appointment. Students have also proved valuable in helping out on days when practices were left short-staffed because of a family emergency or other unexpected event.

Importantly, early signs indicate that individuals participating in the program are also meeting learning objectives. In the first five shelf exams, the students participating in the LIC model performed as well as national levels. While the number of students is small, evaluations of similar LIC programs that have been implemented at Harvard University, University of California at San Francisco, University of Minnesota, and University of North Dakota indicate that students who participate in the LIC generally perform as well or better than those who follow a more traditional training program.[2]

The students also noted several advantages of the training they are receiving compared to the more typical third-year experience. In a larger hospital, students might go through multiple iterations of rounding—first by themselves, then with a resident, an intern, etc. Instead, students in this program just round with their attending physicians. Due to the small number of students at the hospital, they are the first ones to see "interesting" cases. Rather than looking over the shoulders of others in surgery, students in this program may actually be the

ones holding the retractors or otherwise assisting. As one preceptor pointed out, students in this program have the advantage of being taught by experienced physicians, rather than interns.

Those practicing physicians may also benefit from the program. Several preceptors talked about how teaching students helps keep them "sharp" and gives them a "fresh" perspective of what they do. Because students will ask questions, preceptors realize that they cannot simply say we follow this procedure because that is the way we have always done it. Instead, they need to be able to provide an explanation and often it encourages them to look for evidence to support what they do. In this way, according to one site director, the program helps keep preceptors from "getting stuck in a rut." One hospital administrator noted that the program had increased his staff's "enthusiasm for coming to work." He noted that when students participated in a recent morbidity and mortality meeting, it was the most engaged discussion that he remembered having in these monthly meetings. Rather than simply running through the patients, people were asking questions and providing more meaningful discussion of the cases.

The program may also help recruit staff beyond the future physicians who are rotating through the facility. One hospital administrator noted that the LIC program is helping attract candidates to the hospital who might not otherwise have considered coming because they like having the opportunity to teach at the hospital. In addition, in one community the students are planning to talk to local high school students about their career aspirations. It might be valuable for high school students to see that the LIC participants—many of whom are from rural communities themselves—have been able to pursue their interest in becoming doctors.

One site director shared a story that illustrates several of the benefits of the program. A member of a student's patient panel gave birth to a baby with a congenital heart defect. The defect was picked up using a screening technique the rural hospital had adopted several years earlier and the baby was taken to an academic facility in an urban community for cardiac surgery. Unfortunately, the baby died shortly after the surgery. The site director noted that the student is gaining an understanding of the mother's depression in context. According to the director, "this is the way to train compassion; it gets us back to why we wanted to be physicians in the first place." The student had the opportunity to go through this grieving process with the support of a preceptor with whom she had developed a relationship over time. The director also noted that this incident has helped to foster stronger relationships between the rural hospital and the academic institution. Because the student had travelled to the hospital and asked questions of physicians practicing there, there is a new interest in collaborating across the two facilities to enhance care for infants in Maine.

This anecdote also points to the value that the program may have even among those students who do not go on to practice in rural communities. One physician explained that if the LIC students practice in urban communities they will be able to help combat misconceptions that rural physicians are not as skilled as urban ones. A student expressed a similar sentiment, explaining that it would be helpful for all Maine physicians to spend time in rural areas so that they will be better able to understand the patients who are referred from those communities and the physicians who refer them.

What Challenges has the Program Faced and What Lessons have been Learned?

Overall, the students we spoke with had positive feedback about their program. However, they did note challenges. There is some concern that students will not be adequately prepared for the shelf exams as, particularly in the beginning of the program, they will have had many fewer hours focused on each discipline than would students who had just completed a rotation dedicated to that topic. MMC has adjusted the order of the exams in response to student requests based on the topics they feel most comfortable with.

Several students also noted the challenges associated with having such a small number of students in one community. They commented that there are few young professionals with which to socialize and were thankful that there were at least a few other students going through the program with them. They also noted that it can be challenging to know what level they should be performing at because in the absence of other interns and residents, there is no one else to benchmark their progress against except for attending physicians.

The preceptors also described several challenges. Taking time to mentor students may require physicians to thin out their schedules. In rural communities where there may already be limited access to care, this could exacerbate the problem. In addition, some preceptors initially felt that they do not have adequate time to help students learn all of the skills related to their discipline in just a few hours a week. It may take a couple of months

to appreciate that cumulatively preceptors will have sufficient time with the students.

In Maine, training for preceptors was offered at each of the facilities. The content of the training was valuable for rural physicians who may have less extensive experience teaching students. Being able to provide the training at each hospital was also helpful as it can be challenging to ask several physicians from one facility with limited staff to travel at the same time to attend a course.

While staff involved in the MMC program are optimistic that this type of program could be rolled out in other rural communities, they did caution that hospitals need to assure that there is a strong core of services provided at the host hospital. Students will need to be able to observe births, surgeries, MRIs, etc. As such, a hospital with a small staff that provides general specialty services—e.g., OB/GYN, orthopedics—only once a month or not at all, will not allow students sufficient exposure to all the disciplines they need to study. Similarly, it may not be appropriate to house the rotational program in a hospital with only one surgeon on staff, as that individual might go on vacation or tire of being solely responsible for mentoring the students. Before committing to a project like this, it is also important that hospitals be aware of the costs associated with it. In Maine, the hospitals provide housing for the students and also support the preceptors. This additional cost can be a burden for rural hospitals that are often already financially strapped.

LIC students gathered for dinner at a site director's home

Photo: Kathleen Hickey.

The individuals involved with implementing this program offered advice to others interested in initiating a similar program:

- **Allow adequate time to plan for the program.** MMC spent two years preparing for the program before launching it.
- **Check that logistical arrangements are in place.** Hospitals need to verify that their insurance will cover participating students. Another challenge is finding a source of health care for the students; because it is not ideal for students to see their preceptors for medical care, the program may need to arrange for alternatives. In addition, if the program will hold sessions using web conferencing, it is essential that the system be reliable and easy to use.
- **Encourage students to use organizational tools.** One of the program's strengths is that it exposes students to the reality of being a physician and the need to keep on top of a schedule which may entail seeing patients in different facilities. In order to succeed, one site director recommended that students use a paper or an electronic calendar to keep track of appointments.
- **Consider compensating preceptors.** MMC requires all participating hospitals to pay their preceptors. If it were a voluntary position, preceptors may have less buy-in and site directors may be limited in their ability to require preceptors to complete trainings or fulfill reporting requirements. In addition, serving as a preceptor may take time away from being able to see patients; compensation could help alleviate that burden.
- **Connect with other LIC Programs.** The network director has been communicating with other sites across the country that have implemented similar programs. This networking has allowed her to anticipate potential challenges and to borrow templates and other materials from her colleagues.
- **Expect a period of adjustment.** Having heard from other LIC sites that preceptors and students may be a little anxious at the start of the program as they adjust to a system so different from the traditional rotational training program, MMC was able to alert participating site directors and preceptors. Knowing in advance that the first several months may be a little rocky, helped provide some of the sites with the confidence necessary to push through initial challenges and more quickly move to the "mature" stage of the program where both students and preceptors are assured that students will master the necessary skills.

Why Practice in a Rural Community?

While we were on the site visit, we had the opportunity to ask several physicians practicing at the hospital why they had decided to live and work in a rural community. Several spoke about growing up in rural areas or having had a practicum in a rural community. They noted that there are challenges with practicing in rural areas, particularly because it often requires more time on call. However, one physician explained that "everyone takes care of each other" and colleagues are willing to fill in if one physician wants to attend his/her child's school play or has another personal or family obligation. Not only do rural physicians look out for each other, but several physicians talked about the support of the broader community—including bankers who were willing to give mortgage loans to new physicians even though they were carrying large amounts of medical school debt.

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> *– student participating in LIC program*

Another motivation for working in a rural area was being able to fill a need. One of the physicians explained that there were only five physicians in the area when he first moved there. That physician recalled the many patients he saw the first day he hung his shingle and noted that the demand has not diminished since. He was also helpful in building the reputation of the area as one where high-quality medicine is practiced, which helped attract some of the younger physicians to the hospital.

Another physician described her interest in being able to build a relationship with her patients. She said that she and her husband "wanted to know patients when they are sick and when they are well, not just pass them off."

One of the students enrolled in the LIC echoed these sentiments. She explained that she did not decide to pursue medicine until after college when she returned to the rural community she grew up in and discovered she was "very passionate about health care and health care access." As she explained, "I don't believe that how healthy you are should depend on where you live."

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