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Perspective

RIME and Reason

A Medical Student Perspective of Clinical Training in Student-Run Free Clinics

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Abstract

Student-run free clinics (SRFCs) are unique clinical settings that combine service to underserved populations and medical student education. SRFCs empower students to take charge of real patients' care prior to entering clerkship rotations. This real-world education, by fostering an early experience of clinical responsibility, helps students prepare for the role transitions described by the RIME (Reporter-Interpreter-Manager-Educator) framework that defines the training and development of physicians – from reporters and interpreters of clinical data, to patient care managers, to educators of the next generation. We present a narrative of one medical student's formative experiences at SRFCs during his preclinical and early clinical years to highlight their value in preparing students for their future careers.

"To study the phenomenon of disease without books is to sail an uncharted sea, while to study books without patients is not to go to sea at all."
— Sir William Osler (1901)[1]

The value of learning medicine through observation and practice became a cornerstone of the Flexner Report in 1910, and today, many United States medical schools strive to provide students with early exposure to patient care.[2] An entity that has emerged to fill this need is the student-run free clinic (SRFC). These unique practice settings, which combine its members' passion for serving vulnerable or underserved populations with a mission to educate medical students, have more than doubled in number between 2005 and 2014.[3] The literature examining early clinical experiences at these clinics have highlighted their potential to expose students to concepts that may be lacking in formal medical school curricula (e.g., community health, systems-based practice, interprofessional or team-based care), alter trainee attitudes towards practicing primary care or working with underserved populations, improve students' clinical skills, and shape the development of professional identity in young doctors-to-be.[4-16]

Medical and undergraduate students at Stanford University operate two free clinics, Arbor and Pacific, which provide primary care and specialty services to underserved populations in the San Francisco Bay Area and aim to transition patients into a primary care home. All medical students are required to participate in these clinics during their preclinical years as well as during their ambulatory and family medicine clinical rotations, and many students choose to complete more shifts than are required or volunteer to serve as clinic managers. When volunteering at these clinics, students follow the mantra of "see one, do one, teach one," and even during their preclinical years, they gradually experience the role transitions that will be expected of them in their clinical years and beyond: from reporter and interpreter of clinical information, to manager and steward of patient care, to educator of the next generation of physicians – or at least the next class of matriculated students. These transitions are described by the RIME (Reporter-Interpreter-Manager-Educator) framework that is currently used across many medical schools in the United States to evaluate medical student progress through their clinical years.[17] This model defines a physician's developmental milestones as

discrete roles with essential skills and levels of clinical responsibility. For example, medical students spend their clerkship years honing their skills as a reporter and developing into an interpreter, while interns and residents spend long hours transitioning into effective managers, and fellows and attending physicians grow both as managers and educators through their interactions with physicians-in-training.

The transition from preclinical to clinical student is one that may elicit significant anxiety, especially related to the increase in patients' and preceptors' expectations.[7,18] SRFCs, by providing opportunities for preclinical students to ascend the steps of the RIME model in a supervised but ungraded environment, may serve to lessen this anxiety. This potential is relatively unexplored by qualitative or narrative reports. Here, we present one medical student's journey in SRFCs via a series of vignettes with an aim to underscore the role that these clinics play in students' evolution as physicians.

My First Patient

My first visit to a SRFC as a first-year medical student was nerve-racking. I arrived at Pacific with no idea what to expect and more questions than answers: What chief complaints lay on the other side of the examination room door? How do clinics actually operate? What if I say the wrong thing? What does the supervising resident expect from me? I was terrified of making a critical error, like forgetting to gel my hands or missing a tumor. Honestly, I could barely remember the components of a basic medical history since we had just learned them about a week ago, so I was relieved when a second-year student told me I could just observe her and ask questions afterwards. We entered the room to find "my" first patient, an elderly man with hepatitis who appeared as a dictionary definition of jaundice. I stumbled to introduce myself, and when he happily acknowledged me as a future doctor, I became acutely aware of the inexperience concealed by my white coat bearing the Stanford insignia (which was compounded by the fact that, at Stanford, medical students wear long coats rather than the short trainee coats worn at many other schools). However, what drew me from my internal preoccupations was the humble confidence of the second-year student. I was stunned at how comfortable she was with the patient, how systematically she went about tapping this and palpating that, and how well she was able to impart her knowledge to me. After seeing her, and then the resident, taking care of our patient, I knew I had a long way to go before I could wear the uniform of this profession with as much competence.

I met my true first patient on my second SRFC shift after we had just finished our first organ system block (pulmonology) towards the end of our first year. The patient waiting area at Arbor was packed when I went to call her name. While we walked together to the exam room, I was steadying myself with memories of my standardized patients and the knowledge that I had a history and physical template on my clipboard in case I forget something. When we sat down across from each other, I started the interview as broadly as I could: "What brings you in to clinic today?" Immediately, she produced from her handbag a piece of paper with multiple bulleted topics for her visit related to a gastrointestinal condition and multiple medication side effects. Normally, the standardized patients have one complaint limited to the organ systems we have already studied, so already I felt completely out of my depth. As I informed her that we would do our best to address all of her concerns today, I was not sure whether I was reassuring her or myself. Either way, we began delving into each bullet point together. Upon exiting the room with a filled-out H&P template, I found myself presenting to a resident for the first time. What I remember from that moment, rather than whether my presentation was concise or my assessment included a broad enough differential, is that this was my first time speaking for – advocating for – my patient. After four years of pre-medical coursework, countless hours of research, and innumerable drafts of personal statements proclaiming my desire to become a doctor, the responsibility of gathering and reporting her perspective was now my privilege.

I still wasn't sure that I was ready, but the SRFC gave me a safe space to practice knocking on the door, entering the exam room, and starting my clinical reasoning with the first glance. From this patient forward, the opportunity to spend my time learning to care for underserved patients (under

the watchful eye of the residents and attendings who ensured the quality of our patients' care) became a vital fixture in my preclinical curriculum.

Managing Art and Science

During my second year of medical school, I served as one of the lab coordinators at Arbor, which entailed reviewing lab and imaging studies with the medical directors of the clinic and communicating results to patients over the phone. At first, this seemed like a straightforward job (what could be simpler than telling someone that their blood sugar was high?) but I learned very soon that each result was really a springboard for discussions of motivation, concerns, priorities, knowledge, and access that would determine what we and the patient would decide to do with the result. I saw the attending do this a few times before I tried it myself, and I was amazed at how often conversations about hypertension or osteoporosis turned into dialogues about family dynamics and online searches to find the nearest grocery store, before we even discussed prescribing a medication or engaging in motivational interviewing. As time passed, I became gradually more confident in the science of medicine – be it interpreting laboratory results, diagnosing hypothyroidism or checking a patient's renal function before starting metformin, but where I really grew as a physician-in-training in the SRFC rather than in the classroom was in the art of managing care and developing a plan with the patient, together.

I was getting ready to dial my patient's number from the lab coordinator's office, pausing to check that the patient's name and date of birth on the laboratory result matched her chart. The attending and I had discussed that she got a broad workup for fatigue that showed slight anemia, but we were reassured that her chemistry panel was normal. Her thyroid-stimulating hormone level was on the upper end of normal and her free thyroxine was normal, so I got a primer on subclinical hypothyroidism and the review of systems questions I should ask to rule out clinical thyroid disease. I dialed the number and heard my patient's voice for the first time – she sounded worried, especially after I told her that I was calling from the free clinic with her lab results. I could hear anxiety building in her voice as I started to summarize the normal results, so I suggested that we discuss these results in-person. After she arrived and sat down in the office with her adorable little toddler running around her chair, I could see that she appeared tired and somewhat detached from her son, and noticeably she was neither pale nor jaundiced. We started discussing her results again, and she appeared much more comfortable being able to hear the results at her own pace and ask questions. As I began to deploy my thyroid review of systems, she started to tell me that, because of her fatigue, she was growing increasingly depressed about how little she was able to do for her family. With those last words, her hand reached out to hold her son almost instinctively, like she was trying to make up for her feelings with a gesture of love. I picked up my pen and quickly scribbled a reminder for my next eight questions: *SIGECAPS*.

After my history and physical, I presented my attending with my first assessment and plan of a real patient: depressed mood, likely multifactorial due to major depressive disorder versus hypothyroidism versus adjustment disorder secondary to anemia-related fatigue, that I wanted to treat with iron supplementation, an antidepressant trial, and follow-up in 4 weeks. I was given the freedom to decide how to manage my patient's follow-up. It was at a SRFC that I was first compelled to consider broader aspects of clinical management – such as health care access, patient safety, nutrition, screening and prevention – and advance my knowledge to include a recognition of the gaps in my clinical pattern recognition. Practicing my clinical skills, presenting my findings, refining my clinical reasoning, and translating my classroom education on pathophysiology to take charge of a real patient's care at a SRFC uniquely allowed me to experience these responsibilities before starting my clerkship rotations.

Playing Doctor

During my psychiatry rotation in my third year, a fellow medical student who managed the Arbor mental health clinic asked whether I would be willing and able to come in on a Sunday morning to supervise preclinical volunteers who had just started their early clinical experiences at our SRFCs. My friend reassured me that a psychiatry resident would come later that morning to review

the assessments and plans I made with my fellow students, and with five clerkships under my belt, I would be just fine.

"Willing and able" felt like two requirements instead of one. Willing – of course, anything to help out! Able – therein lay the rub...Was I? At first, my mind raced back to my first days at the clinics, back to the fears of missing tumors and feelings of inadequacy in my full-length Stanford coat. However, I was also reminded of the many patients I had already cared for on the wards and my decreasing unease when nurses addressed me as doctor. Though I had never really taken notice of it, after all this time, my white coat had begun to rest more comfortably on my shoulders. *Perhaps* I could play doctor for a morning.

I arrived at clinic far too early on Sunday morning and met the student volunteering in the mental health clinic before patients started to fill the waiting room. I could feel myself emulating the residents I had worked with, down to asking the student about his comfort with leading the interview and reviewing the components of the mental status exam. Our first patient was a middle-aged man with schizophrenia who had been stable on olanzapine for the past 10 years and presumably was here for a new prescription. As I observed my fellow student obtain the history of present illness, I had my "Matrix moment". Just as in the classic 1999 movie, when Neo realizes he is "The One" and begins to effortlessly block and dodge the previously supersonic punches of Agent Smith, the flow of the interview was no longer outpacing my ability to assimilate each answer and anticipate the questions that should follow. As my fellow student practiced his presentation with me, I was starting to consider social aspects of our patient's care plan that the residents always added to my presentations and formulate constructive feedback to help my peer shine in front of the resident. By the end of the clinic day, I had observed another student's interview, staffed my own patient with undiagnosed Parkinson disease, planted a tuberculin skin test for a man applying for a job, and given a short talk to the clinic volunteers on antipsychotic medications. Before leaving clinic that day, with a feeling of fulfillment that matched the day I took the Hippocratic oath and received my white coat, I asked the resident for feedback on my performance. According to her, I *could* play doctor.

Reflections

As I travel across the country to interview at residency programs, I frequently look back on my journey through the SRFCs – beginning as an observer on the first day, growing into a reporter and interpreter by practicing my H&P and clinical reasoning with real patients, engaging practical problems in providing patient care as a student manager, and transitioning into an educator. During this introspection, I found the RIME in the reason, so to speak, for the significance of my experiences at the SRFCs in my training. This voyage that I have undertaken at our SRFCs, to me, resembles a condensed version of the RIME framework. Although the process through which trainees transition from role to role is expected to span one's clinical training across medical school and residency, my experience at SRFCs allowed me the opportunity to experience these crucial, and often stressful, transitions in a safe and supervised environment earlier than I might have been expected to do so through the formal curriculum alone.

The "student-run" nature of SRFCs is a vital ingredient to creating a vibrant and impactful learning environment to accomplish this. Unlike other early clinical experiences that mostly involve shadowing, SRFCs provide students an environment to practice clinical skills and gain exposure to realistic considerations and challenges of patient care, especially for underserved populations.[11] I believe that my experiences highlight the value of SRFCs, which provide students with a guided tour of the stages of growth that will be expected of us as we progress in our training.[8,19,20] Even though medical students cannot truly operate at the manager and educator level while they are still learning how to be effective reporters and interpreters of clinical information, the opportunity to wrestle with these higher levels of clinical ability, challenge oneself to attempt them, and learn about areas for improvement is surely invaluable to all medical students. By holding greater clinical responsibility at SRFCs, students begin to chart the waters they will explore with books and patients for the rest of their careers. The rewards for maintaining a commitment to serving the underserved are both a glimpse into students' futures as physicians as well as a fairer wind to cast off towards that destination.

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