

# **INTRODUCTION TO THE CASEBOOK**

## Contributing to the Development of the Next Generation of Public Health Professionals: A Preceptor's Perspective

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### INTRODUCTION

The next few lines are a reflection of my past six years as a preceptor with an outstanding group of graduate students. In the spring of 2014, I was fortunate to be involved with the first cohort of Master of Public Health (MPH) graduate students from Western University. It all started with an email sent by Lisa Metselaar at the end of November 2013, asking me if I would be interested in becoming a preceptor to supervise a student practicum the following spring. At the time, I had just completed my third year at the Public Health Agency of Canada, having spent most of my career in the military as a medical officer. I had had some limited experience as a preceptor with the Public Health and Preventive Medicine Residency Program at the University of Ottawa. That spring, the Centre for Food-borne, Environmental, and Zoonotic Infectious Diseases (CFEZID) had moved to a temporary location at the west end of Ottawa while the main building on Colonnade Road was being revamped to meet the new government Workplace 2.0 Fit-up Standards. Most of the other centres were relocated to Tunney's pasture, which made connecting with other colleagues more challenging. So, Delaney Hines (the practicum student) and I travelled a great deal that summer around the city of Ottawa. Nevertheless, we managed to stay informed about most surveillance, emergency management, and work plan on Lyme disease activities.

### THE ROLE OF A PRECEPTOR

The role of a preceptor is fairly simple. In my view, it is to provide a platform for opportunities to consolidate the student's previous learning and develop new ones, get exposed to various activities related to the field of practice in the daily life of public health professionals and start establishing a network of people with various backgrounds involved in the field. Too often, preparing the new wave of the workforce falls solely under the purview of academic institutions. While the importance of workplace learning is certainly well recognized (e.g., co-op programs at the undergraduate and graduate level), government and nongovernment organizations would benefit even more from these unique opportunities throughout the year. As in real life, solutions are not always clearly provided, which emphasizes the importance of the critical thinking fostered during a practicum. During the last few years of his career as the CEO of General Electric, Jack Welch was spending up to 75% of his time training his staff. Sharing knowledge and developing strategies for change management should be integrated in all types of learning-related activities. On the first day of the practicum, I place significant emphasis on creating a safe environment realizing that, over the past 8 months, the planned academic rigour of Western's MPH Program had achieved its objective. But once the students start their practicum, the pace slows down and there is time for them to integrate, correlate, and, in some instances, contemplate and reflect on their new role in public health.

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I keep saying to my own children that learning is not easy. It requires time, energy, sometimes sacrifices, and the willingness to be ready to deconstruct what you have already learned to adapt your new knowledge and perceptions in a different paradigm or conceptual framework. To avoid any form of unnecessary complacency, one foot needs to be outside your zone of comfort otherwise learning may not take place. It may seem like a drastic and unpleasant process but once this mind-set is part of your lifelong learning plan, it becomes second nature and it is quite rewarding to the extent that you always want to learn more about how society works and how to make yourself a valuable asset in your work environment, in your family, and in your community.

The field of public health keeps evolving as information technologies and novel avenues of communication provide new tools and innovative strategies to manage public health data, retrieve information, and practitioners become better positioned to make informed decisions and establish evidence-based policies. For more details on essential skills for public health and the changing world, I highly recommend reading the introductions by Dr. David Jones (Western Public Health Casebook 2018) and Dr. Peter Donnelly (Western Public Health Casebook 2017). I will not reiterate the very formative content of these documents; I will simply use some examples to support the role of a preceptor.

Preceptorship is about developing the skilled human resources that will promote health, engage in the prevention and control of various food-borne and water-borne disease outbreaks, focus at several levels of surveillance on emerging and re-emerging infectious diseases and, to some extent, act as disease detectives to mitigate the risks and sometimes manage the events that may jeopardize the health of the population. It is the mirror-image role of the clinicians who are investigating and treating diseases. Both are complementary; however, the more diseases you prevent the fewer you need to treat. Unfortunately, the link between family medicine and public health is not a strong one. For example, at the Family Medicine Forum—the annual conference for family physicians in Canada—topics related to preventive medicine or infectious diseases are very rare or nonexistent. Over the past two years, we have just started seeing a few presentations on climate change and human health.

Because we are dealing with very different individuals, it is important that we know our students and consider their inspirations in life, their past academic and work experience, their family situation, their countries of origin and languages spoken, and their spiritual and religious beliefs. We must get a thorough picture of the person who we will spend 12 weeks with as we contribute to their development. It may appear somewhat intrusive, but each individual is unique and their practicum needs to be tailored according to their requirements and specific needs. This approach is generally not embraced in the workplace setting because there is a tendency to treat everyone as a uniform group. My outlook is likely a reflection of my career in the military where a close knit environment is required and I learned early that “you must know your people—and you must take care of your people”. The environment in public health is not that different, it is simply a different battlefield.

Over the years, we had the opportunity to be part of “Ex Strategic Play”, a one-week exercise that takes place in downtown Ottawa, mainly involving Canadian Armed Forces, the RCMP, foreign officers, and a few select federal public servants who were chosen to be assigned to senior leadership positions in the government. This is part of a one-year National Security Program course housed at the Canadian Forces College in Toronto that includes significant time on international field trips. My role with the graduate students is to mentor the candidate who plays the part of the Associate Deputy Minister–Public Health throughout a scenario involving a public health disaster in one major Canadian city. Every year, we learn a great deal about risk and crisis communication and how the Deputy Minister–Public Safety handles

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different critical situations. Graduate students are offered the opportunity to share their knowledge, express their thoughts and recommendations about a specific issue, and contribute to the learning of an officer who has no background in public health. S/he could be a fighter pilot, an infantry officer, a military engineer, or could hold any other occupation. Each time, the students really enjoy this activity, which is more than just a regular, run-of-the-mill exercise.

In terms of instruction and learning strategies, hands-on experience, on-the-job-training, and job shadowing are probably some of the preferred teaching approaches in a workplace setting. Friday mornings are normally devoted to the academic half-days with the Public Health and Preventive Medicine Residency Program at the University of Ottawa. One can barely discern the difference between the graduate students and the residents during the discussions and in their capacity to devise solutions. Topics vary from exposure to radon or ionizing radiation, to family violence breastfeeding, and cancer screening. Working with teams and committees that exist already is also fairly easy to coordinate. More targeted learning programs with agencies such as the International Health Regulations National Focal Point office, Quarantine Services, Office of Border Health Services, FluWatch, and other related organizations offer engaging opportunities to explore new fields or simply consolidate what has been learned during the year. The Health Security Infrastructure Branch offers interesting topics to explore as well. As an applied field of practice, I truly believe that public health is best managed at the ground level, i.e., at the municipal level. Regional, provincial, federal, and international levels are important and they have a crucial role to play, but the highest health impact (at least in the short term) is achieved within municipal jurisdictions. One way to develop this expertise is to simulate situations using real scenarios and data and participate in these simulations, whenever possible, in real time. A scenario based on known food-borne or a water-borne illness outbreaks can present such an opportunity. Think of John Snow and the cholera outbreak on Broad Street in 1854 or, more recently, the outbreak of water-borne gastroenteritis that led to the death of six people in Walkerton, Ontario because the water supply was contaminated with *Escherichia coli* and *Campylobacter jejuni*. A simulation requires limited resources and you can never practice your skills during a natural disaster, a deliberate attack (bioterrorism), a pandemic, or during any other situation that may require communication, human resource management, or financial management, just to name a few.

There are adverse public health events occurring almost daily on a small or large scale. The CFEZID has been actively involved with several of them over the past few years. These events have included the H1N1 influenza pandemic of 2009; the 2015 Zika virus outbreak in South America that was declared by the WHO as a public health emergency of international concern; the Ebola outbreaks on the west coast of Africa; and the 2008 Canadian listeriosis outbreak linked to cold cuts processed in a Toronto plant that resulted in 57 confirmed disease cases and 22 deaths. The *Federal Framework on Lyme Disease* is one of our major projects and several MPH graduate students have written their teaching cases using various perspectives on this topic. Because climate change is certainly a major driver in modifying the ecology of infectious diseases, there are several interesting projects to explore in the future. Not only do we need to better understand the impact of these climate-related changes, but we have to acknowledge that as the older adult population in Canada increases, chronic disease rates may surge. This is already the new reality and it is imperative that the public health professionals who can mitigate these crises and intervene through surveillance and health communication have available all the tools they need to accomplish these tasks.

Over the years, some of our graduate students have published their work in our journal *Canada Communicable Disease Report*. Realizing that the practicum starts and after a short time is already completed, it is surprising to see how much gets accomplished in those 12 weeks.

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Although I do not have the authority to hire new public servants at the Agency, some graduate students from previous classes are working here under different contracts. It is rewarding to see the continuity from school life to entering the labour force. I would certainly like to keep most of the MPH students every year. But what motivates me the most about being a preceptor is my appreciation of the dynamic of this next generation of health professionals. I have reached a point now where few people from the latest cohort were born before my youngest child. At first, it hurts to see how fast time flies and by the time this is published I will have reached my 40th year with the Government of Canada, having started at an early age at the Officer Candidate School in Chilliwack, British Columbia. But learning never ends and we always learn from ourselves and from each other. It is a matter of taking the opportunity when an issue presents itself on your screen. Past experiences cannot be neglected but too often there is a tendency to rely on the same solutions even though there are many other ways to resolve new problems. Public health is an interdisciplinary discipline and this is the reason that it is so interesting as a field of practice. Engineers, physicians, lawyers, nurses, epidemiologists, social scientists—no occupation can be excluded when it comes to understanding and finding solutions for the health of the population.

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