Public Health Electives for Medical Students: Recommendations and Survey Analysis

March 2015

Analysis Prepared by:
The AFMC Working Group on Engaging Medical Students in Public Health
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Stages optionnels en santé publique pour les étudiants en médecine :
Recommandations et analyse des résultats de l’enquête

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on Engaging Medical Students in Public Health

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**Glossary of Acronyms**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACIP</td>
<td>Advisory Committee on Immunization Practices</td>
</tr>
<tr>
<td>AFMC</td>
<td>Association of Faculties of Medicine of Canada</td>
</tr>
<tr>
<td>AHD</td>
<td>Academic Half Day(s)</td>
</tr>
<tr>
<td>AMOH</td>
<td>Associate Medical Officer of Health</td>
</tr>
<tr>
<td>BOH</td>
<td>Board of Health</td>
</tr>
<tr>
<td>CaRMS</td>
<td>Canadian Resident Matching Service</td>
</tr>
<tr>
<td>CD</td>
<td>Communicable Disease</td>
</tr>
<tr>
<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
</tr>
<tr>
<td>EHO</td>
<td>Environmental Health Officer</td>
</tr>
<tr>
<td>EIS</td>
<td>Epidemic Intelligence Service</td>
</tr>
<tr>
<td>F/P/T</td>
<td>Federal/Provincial/Territorial</td>
</tr>
<tr>
<td>FNIHB</td>
<td>First Nations Inuit Health Branch</td>
</tr>
<tr>
<td>GP</td>
<td>General Practitioner</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>HR</td>
<td>Human Resources</td>
</tr>
<tr>
<td>ID</td>
<td>Infectious Disease (Local Infectious Disease Department)</td>
</tr>
<tr>
<td>MHO</td>
<td>Medical Health Officer</td>
</tr>
<tr>
<td>MOH</td>
<td>Medical Officer of Health</td>
</tr>
<tr>
<td>MPH</td>
<td>Masters of Public Health</td>
</tr>
<tr>
<td>MSM</td>
<td>Men who have Sex with Men</td>
</tr>
<tr>
<td>PD</td>
<td>Program Director</td>
</tr>
<tr>
<td>PH</td>
<td>Public Health</td>
</tr>
<tr>
<td>PHAC</td>
<td>Public Health Agency of Canada</td>
</tr>
<tr>
<td>PHI</td>
<td>Public Health Inspectors</td>
</tr>
<tr>
<td>PHIG</td>
<td>Public Health Interest Group</td>
</tr>
<tr>
<td>PHPM</td>
<td>Public Health and Preventive Medicine</td>
</tr>
<tr>
<td>PHU</td>
<td>Public Health Unit</td>
</tr>
<tr>
<td>RBC</td>
<td>RBC Royal Bank</td>
</tr>
<tr>
<td>RN</td>
<td>Registered Nurse</td>
</tr>
<tr>
<td>SLP</td>
<td>Speech Language Pathologist</td>
</tr>
<tr>
<td>STBBI</td>
<td>Sexually Transmissible and Blood-borne Infections</td>
</tr>
<tr>
<td>STI</td>
<td>Sexually Transmitted Infection</td>
</tr>
<tr>
<td>TB</td>
<td>Tuberculosis</td>
</tr>
</tbody>
</table>
1. Survey background

Beginning in 2014, the AFMC Engaging Medical Students in Public Health Working Group undertook a survey in order to determine the attributes of excellence in elective rotations in public health for medical students. The survey aimed to identify and report on these attributes in order to disseminate best practices for elective rotations offered by medical schools and public health organizations. The stakeholders surveyed included medical students, residents, Public Health and Preventive Medicine program directors and administrators, and other individuals involved in public health education for medical students.

The survey was collaboratively created by the working group and distributed in French and English through Fluid Surveys [http://fluidsurveys.com]. The survey was widely disseminated to relevant stakeholders through medical schools across Canada, and Public Health and Preventive Medicine programs. Three gift card prizes were offered to medical learners as incentive for responding to the survey. Responses were collated and thematic analysis was employed by a sub-group of the working group in order to derive best practices and recommendations regarding public health electives.

While the focus of this study was on electives and experiences that might attract and shape the choices of those entering into the public health field, a number of the responses remind us that those ultimately choosing to pursue other disciplines would benefit from such an elective. While this is true of virtually all other disciplines, it is especially appropriate for primary care disciplines. It is also true that many candidates move to public health later in their careers. Thus, these findings are worthy of consideration (and action) by those responsible for the elective programs in each of our 17 medical schools.

This work is part of a national project by the Association of Faculties of Medicine of Canada to better engage learners and raise the profile of public health within medical education in Canada. Funding for the project was provided by the Public Health Agency of Canada (PHAC). The recommendations in this report were made independently by the working group and do not necessarily reflect the opinions of PHAC.

For more information on AFMC’s public health project and related resources: http://www.afmc.ca/social-public-health-e.php

Contact: publichealth@afmc.ca
2. Recommendations

To create a great elective experience in public health for medical students:

Inform students about public health and elective opportunities

1. **Advertise opportunities broadly**, starting early in medical school and including Public Health Interest Groups, journal clubs, career evenings and targeted information sessions.

2. **Ensure the details of elective experiences are available online** via the electives catalogue, [AFMC Student Portal](#) or faculty website targeted to medical students.

3. **When advertising an elective, clarify the scope of the experience.** For example, state whether the elective is working with a medical officer of health, is specific to a particular project or is a general experience in the field of public health.

4. **Further engage public health physicians**, as well as other physicians with an interest in public health, **in teaching components of public health early in medical school**.

5. **Provide mentorship opportunities between students and public health physicians**, allowing students to ask questions as they progress through medical school.

Develop student-specific learning objectives

6. **Discuss the student’s interests and learning objectives prior to or at the start of the elective.** Medical students come with a variety of knowledge and experience regarding public health, from very little prior exposure to an MPH degree.

7. **Create well-defined and achievable objectives for the elective.** In the objectives, identify topics to be covered and possible skills to be gained through the experience. Create customizable opportunities depending on the student’s career aspirations and interests.

Focus elective content and activities on the student

8. **Provide a broad overview to public health services, but more importantly give sufficient exposure to the work of a medical officer of health.** This is important for medical students to understand what a career in public health and preventive medicine would look like.

9. **Include defined project work** that is realistic in scope, exciting, and engaging for the medical student.

10. **Involves students in projects and meetings** where they may witness decision-making first hand. Also provide a briefing, background reading and material for discussion including past minutes and agendas beforehand to ensure the student is well-informed and engaged about the topic.

11. **Provide opportunities for students to meet with non-physicians** (e.g. public health inspectors, public health nurses, epidemiologists) as well to better identify the many roles and collaborative efforts involved in public health.

12. **Provide opportunities for students to meet with residents in the program** through academic half days or organized meetings.

13. **Provide and ask for feedback throughout the rotation** to maintain direct contact between the student and preceptor and to help achieve the defined objectives.
3. Quantitative Survey Analysis

3.1 Respondent Information

Total Number of Respondents = 110

Language of Response

<table>
<thead>
<tr>
<th>Language</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>94</td>
</tr>
<tr>
<td>French</td>
<td>16</td>
</tr>
</tbody>
</table>

Q Affiliated Medical School/Organization

<table>
<thead>
<tr>
<th>Affiliated Medical School/Organization</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>McGill University</td>
<td>5</td>
</tr>
<tr>
<td>McMaster University</td>
<td>7</td>
</tr>
<tr>
<td>Memorial University</td>
<td>2</td>
</tr>
<tr>
<td>Northern Ontario School of Medicine</td>
<td>3</td>
</tr>
<tr>
<td>Queen's University</td>
<td>12</td>
</tr>
<tr>
<td>Université de Montréal</td>
<td>3</td>
</tr>
<tr>
<td>Université de Sherbrooke</td>
<td>7</td>
</tr>
<tr>
<td>Université Laval</td>
<td>4</td>
</tr>
<tr>
<td>University of Alberta</td>
<td>7</td>
</tr>
<tr>
<td>University of British Columbia</td>
<td>15</td>
</tr>
<tr>
<td>University of Calgary</td>
<td>5</td>
</tr>
<tr>
<td>University of Manitoba</td>
<td>4</td>
</tr>
<tr>
<td>University of Ottawa</td>
<td>3</td>
</tr>
<tr>
<td>University of Saskatchewan</td>
<td>6</td>
</tr>
<tr>
<td>University of Toronto</td>
<td>13</td>
</tr>
<tr>
<td>Western University</td>
<td>2</td>
</tr>
</tbody>
</table>

Q What is your position?

<table>
<thead>
<tr>
<th>Position</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public health resident</td>
<td>45</td>
</tr>
<tr>
<td>Medical student</td>
<td>33</td>
</tr>
<tr>
<td>Other resident</td>
<td>9</td>
</tr>
<tr>
<td>Program director</td>
<td>8</td>
</tr>
<tr>
<td>Public health preceptor</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
</tr>
<tr>
<td>Program administrator</td>
<td>3</td>
</tr>
</tbody>
</table>
3.2 Medical Student/Resident Questions

Q How would you rate your overall elective experience?

<table>
<thead>
<tr>
<th>Not worthwhile</th>
<th>Very worthwhile</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Q In my elective, I was able to get a good understanding of what a public health physician does.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Q In my elective, I was able to become involved in a public health project that was interesting to me.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Q In my elective, I was able to interact with Public Health and Preventive Medicine residents.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Q Have you done or do you plan to do a public health elective as a medical student?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>62</td>
<td>8</td>
<td>7</td>
</tr>
</tbody>
</table>

Q What type of public health elective(s) did you do IN MEDICAL SCHOOL?

<table>
<thead>
<tr>
<th>Public Health Setting</th>
<th>Local</th>
<th>Provincial</th>
<th>Federal</th>
<th>International</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>44</td>
<td>22</td>
<td>3</td>
<td>8</td>
<td>14</td>
</tr>
</tbody>
</table>

Q Is there an operational Public Health Interest Group (PHIG) at your medical school?

<table>
<thead>
<tr>
<th>Yes, I am/was a member</th>
<th>Yes, but I have not participated</th>
<th>Unsure</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>11</td>
<td>28</td>
<td>19</td>
</tr>
</tbody>
</table>

Q What do you think is minimum duration of an elective IN MEDICAL SCHOOL to have a good exposure to public health?

<table>
<thead>
<tr>
<th>1 week</th>
<th>2 weeks</th>
<th>3 weeks</th>
<th>4 weeks</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>39</td>
<td>8</td>
<td>27</td>
<td>5</td>
</tr>
</tbody>
</table>
3.3 Program Director Questions

3.3.1 Promotion of Electives and Residency Options

Q How do you profile the PHPM residency program to medical students?

| Lectures about public health during core medical school curriculum | 8 |
| Career fairs or CaRMS information sessions | 8 |
| Sessions for public health interest group | 6 |
| We don’t profile the program | 2 |

Q Do you have administrative support for setting up public health electives for medical students?

<table>
<thead>
<tr>
<th>Yes</th>
<th>Yes, but not sufficient</th>
<th>Unsure</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Q Is there an operational Public Health Interest Group (PHIG) at your medical school?

<table>
<thead>
<tr>
<th>Yes</th>
<th>Unsure</th>
<th>Previously, no longer operating</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>6</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Q If there is a PHIG, is your PHPM residency program connected to it?

<table>
<thead>
<tr>
<th>Yes</th>
<th>Unsure</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

3.3.2 Recruitment

| Q Our PHPM program gets too many applications for the number of spots we have (in the first round of CaRMS). |
| Strongly disagree | Strongly agree |
| 1 | 2 | 3 | 4 | 5 |
| 3 | 3 | 6 | 2 | 2 |

| Q Our PHPM program gets too few applications for the number of spots we have (in the first round of CaRMS). |
| Strongly disagree | Strongly agree |
| 1 | 2 | 3 | 4 | 5 |
| 4 | 1 | 6 | 4 | 1 |

| Q Spots in our PHPM program regularly go unmatched. |
| Strongly disagree | Strongly agree |
| 1 | 2 | 3 | 4 | 5 |
| 8 | 1 | 1 | 4 | 1 |

| Q Medical students, APPLYING TO PHPM, have a good understanding of what the PHPM program involves. |
| Strongly disagree | Strongly agree |
| 1 | 2 | 3 | 4 | 5 |
| 0 | 2 | 3 | 9 | 1 |

| Q Medical students, IN GENERAL, have a good understanding of what the PHPM program involves. |
| Strongly disagree | Strongly agree |
| 1 | 2 | 3 | 4 | 5 |
| 5 | 5 | 4 | 3 | 0 |

| Q Medical students applying to public health should have done at least one public health elective. |
| Strongly disagree | Strongly agree |
| 1 | 2 | 3 | 4 | 5 |
| 1 | 1 | 1 | 7 | 7 |

| Q Elective requests in public health at your medical school are becoming increasingly popular. |
| Strongly disagree | Strongly agree |
| 1 | 2 | 3 | 4 | 5 |
| 0 | 1 | 6 | 8 | 2 |
4. Qualitative Survey Analysis

4.1 Medical Student/Resident Questions

Q Did the public health elective experience change your thoughts about public health in general and as a potential career option? If so, how?

Yes, the exposure assisted my decision to pursue public health.

- Engaged preceptors helped to make the exposure interesting and exciting.
  - “The chief medical officer of health locally recognized my interest and convinced me to reconsider public health as a career.”

- Changed preconceived notions about public health work and stigma about just paper-pushing.
  - “Yes, helped me view it as an entirely plausible and desirable career option with a diversity of possible roles for me.”

- Interest grew with each elective.

- Helped to clarify what PHPM doctors do.
  - “Yes, it opened up my view of what PH actually does, and increased my understanding of the field.”

- Provided public health exposure that was lacking in medical school.
  - “Yes, it made it clear that I want to apply to the PHPM program. You finally get to see what a PHPM physician does, which was not clear at all in pre-clerkship. With the hidden curriculum, there was also a lot of almost bashing and it made students feel that specializing in public health is inferior to other specialties and do not garner much respect. However, after working with PHPM physicians it is clear how the work they do is relevant to clinical medicine and what they offer to improve the population's health.”
  - “Yes, but unfortunately after the CaRMS deadline. Didn’t really know what the career was all about until my elective! Definitely not covered very well in medical school.”

I was already committed to public health.

- There is a selection bias of those doing public health electives, many already want to pursue the specialty.
  - “Want to pursue public health after the electives. Then again, I think there is a self-selection bias at play because I was clearly already interested in pursuing a public health career.”

- Electives confirmed a pre-existing interest in pursuing public health.
  - “Yes, the rotation confirmed my career choice. I already had the impression that this specialty would be consistent with my values, interests and abilities (from the idea that I had).”
No, the experience dissuaded me from public health.

♦ Had preceptors that were not engaged in their elective.
  o “Yes, it made me not want to pursue it as a career; no interest from a number of preceptors to discuss a job outside of government work. No direct supervision. Did not encourage individual interests.”

♦ Gave exposure to the fact that there is limited patient interaction.
  o “Yes — I did not realize how little direct patient contact there is, which turned me away from public health.”

Q Please provide any additional comments that you have with respect to public health electives for medical students, or the recruitment/promotion of Public Health & Preventive Medicine for medical students.

Ways to improve public health electives

♦ Components to include in elective rotations
  o “Exposure to public health should include a diversity of experiences (clinical, administrative) with different aspects (promotion, protection, surveillance, research)
  2. Shadowing with a PH resident
  3. Attending academic half days for the PHPM residents
  4. An overall view to PH orientation for even 15’–30’ to PH.”
  o “My key advice to any medical student interested in an elective is
  1. It needs to be at least 4 weeks to have enough exposure to the work and get a real project you can work on.
  2. You have to do projects. Shadowing won’t help you understand what you’ll do as a PHPM physician, and it is also really boring to sit and listen when you’re used to doing work as a medical student.”

♦ Increase preceptor involvement.
  o “More direct involvement with the preceptor and just being involved in some meetings would be neat + give a better idea of what day-to-day life of a Medical Officer of Health would be like.”

♦ Create project work for medical student.
  o “In watching medical students it strikes me that most electives they undertake are primarily of the show and tell variety. To whatever degree possible I think it is helpful to provide them with a role where they can accomplish meaningful work.”

♦ Facilitate access and awareness of public health elective opportunities.
  o “It would be great to have a central PHPM portal listing all academic & professional opportunities for medical students!”
  o “These courses should be better publicized and more with students. Work should be done from the preclinical to publicize the courses should be available for students at the school.”
Public Health Electives for Medical Students: Recommendations and Survey Analysis

Improve exposure earlier in training.

♦ Create mandatory rotations early-on for medical students.
  o “I think it would be very valuable to improve the mandatory public health exposure to medical students early on — and to make it enjoyable rather than burdensome.”

♦ Improve teaching of public health earlier in medical school.
  o “I believe that exposure to public health should begin from the first day of medical school and should continue all through the duration of medical school. We should advocate public health webinars and lectures online that identify core or hot topics in public health so as to seed and feed the interest in medical students as they grow year after year.”

♦ Get public health exposure from PHPM specialists.
  o “We often had family physicians who ‘have an interest’ in global health. Not to say they are necessarily poor teachers, but that did not teach me what most PHPM specialists actually do, what the residency program is like, and what kinds of career options at the end of training.”

♦ Create engaging opportunities in public health for medical students.
  o “Although we are taught the theory of Public Health and the Social Determinants of Health, we as medical students are not exposed to or involved in some of the public health campaigns that are new or ongoing in our community — recent removal of fluoride from the water, flu vaccine campaigns, or how the built environment affects our health. There are many interesting and relevant topics to get students engaged in public health and consider it as a career opportunity.”

♦ Create exposure opportunities in medical school to what PHPM does, not only broader public health issues.

Q Did an elective you completed in medical school influence your decision to pursue PHPM?
If so, in what way?
(Question for Public Health and Preventive Medicine Residents — current or former)

Yes, the elective helped me decide to pursue PHPM.

♦ Understand scope and breadth of PH.
  o “Yes, PHPM elective offered me chance to see the breadth of practise and responsibilities available to PHPM specialists.”
  o “Yes. It was great to see the actual scope of public health, and how public health is actually done day-to-day.”
  o “Yes. As a medical student, our exposure to public health is minimal and only theoretical (some courses on occupational health, environmental health, etc.). My public health rotation opened me to this discipline as a career because of the variability of the field, the nature of work (project management, teamwork, etc.) perspective/unique role as a doctor dealing [with] the health of a population and opportunity to have a good ‘lifestyle’ (vs. surgery ...)”
  [Translated from French]
Observe what PH/PH physician does.

- The elective did help me in my decision to pursue PHPM as it allowed (me) to see what a PHPM career might look like. It allowed me to see the issues that were discussed, the skills that were required, and the difference one could make in the field.

- It did — very briefly, it helped me see what sorts of things public health physicians did, something that was not obvious from medical school.

- Yes. It seemed one of the only ways to actually begin working on determinants of health and true prevention of disease, which was inspiring. Nevertheless, I think there was not enough exposure to the actual work of the physicians in Public Health.

- Yes. I had the opportunity to see Public health in action; by visiting and inspecting various sites and facilities.

- Yes, it opened a door to me. I got a sense of the importance of prevention, health protection and health promotion.

- I went to school where a PHPM program did not exist. I was peripherally aware of the specialty but knew little else until I was able to contact someone working at a health unit and spend time with them on an elective. The simple act of seeing what a health unit does and figuring out how it works is an extremely important part of learning about the specialty, and it made a huge difference in how competitive I was as a candidate and how prepared I was to engage in this work in the future.

- Yes. In externship time, we had a mandatory rotation in public health, which involved only courses. I had an interest in public health, but I asked myself what the life of a public health doctor was like on a daily basis. It was only in doing an elective rotation that I was able to understand the other aspects of public health.

- Was attracted to the ability to combine interests in medicine and policy. Practice of public health also seemed very diverse and therefore interesting.

Important mentorship and role model

- I also spent time at a larger health unit and was under the mentorship of a very senior public health physician. Without mentorship, it is highly unlikely that I would have understood what the field was all about and what would be expected of me if I were to play the same roles they were playing.

- Yes — it was a fabulous experience and confirmed my intellectual interest in and suitability for public health. Yes — I was already pretty convinced that public health was the specialty for me, but I did two electives with inspiring mentors that left me without any doubt.

- Yes, I have had inspiring role models, involved with partners and communities that were truly passionate about their work. I understand the role and work of the public health physician (which the mandatory rotation in community health did not allow me to do well).

Miscellaneous

- Yes, I enjoyed my PH&PM electives, which made me consider pursuing PH&PM during residency.

- Yes, I was not certain of my career path in PHPM until I completed my two electives.

- Yes, a rotation in infection prevention in hospital settings during my externship.

- Community medicine elective in harm reduction [...]

...
“The work seemed intrinsically enjoyable and suited to my talents, but most of all I noticed how much more at home I felt with public health people, who seemed to share my values and worldview much more than other doctors.”

Confirmed prior interest.

**Overall exposure to PHPM**

- “I desired to pursue PHPM prior to entry into medical school and my PHPM electives in medical school helped to positively reinforce this career choice. My public health electives exposed me to the breadth of public health practice and the everyday realities of local/municipal public health practice. It was also a welcome opportunity to be linked with PHPM professionals as role models and mentors (such opportunities are generally lacking in the remainder of medical school).”

- “Partly. I pursued PHPM because of my prior interest and experience in public health. The public health elective played the role of giving me exposure to the specialty that I would never have had otherwise, since the mandated exposure and curriculum in public health in medical school, outside of electives, was sorely lacking (most medical students and preceptors in medical school generally aren't even aware public health is its own specialty).”

- “Yes, completing public health electives confirmed my interest in the field.”

- “Yes. Great electives. Confirmed my decision.”

- “Confirmed my interest.”

**Miscellaneous**

- “Yes, but I was already pretty set on PHPM so I didn’t need much convincing.”

- “Yes — it confirmed for me the breadth of public health practice.”

- ‘Sort of. My first elective was largely observational and I found it very boring. It made me wonder if I should really do PHPM. My second elective I deliberately scheduled for 4 weeks and asked to have projects assigned before accepting the elective to ensure I’d get a better look at what the specialty is and what I would do as a public health physician (as opposed to what a public health organization does). This reassured me that PHPM could be a career I would enjoy.”

- “I had already made my decision to opt for PHPM before my elective rotation (which was done in another faculty, because there was not really a course organized by PHPM my ability [sic] during my clerkship) but my rotation confirmed my choice. I met different doctors in different sectors, giving me an idea of medical practice in PHPM. I think an elective rotation in PHPM must allow the student to experience the work of a specialist doctor in PHPM (or family doctor working in public health). There must be concrete exhibits, so that the student understands the importance of this specialty, the various options and the many implications of this area.”

- “Lunchtime talk in medical school sparked an interest in public health.”

**Influence by course work in med school/mandatory rotation**

- “Yes, the course that I took during my clerkship confirmed and clarified my choice to go to Public Health. It somehow reassured me about the possibility of combining some clinical work and public health practice. It depends what you mean by an elective.”
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Negative influence

- “I did not like my elective rotation in public health while I was outside. The course influenced me negatively. I only considered public health residency a few years later.”

No influence

- “I am international medical graduate. “
- “No, an elective did not influence my interest in public health.”
- “At [my school] it is a mandatory course. So I have not completed an elective rotation. But anyway, my mandatory rotation did not greatly influence my decision to opt for public health. The courses have changed since I did mine and are much closer to the ground now.”

Q As a medical student, how did you find out about the public health elective? Was it advertised through the school and professors/word of mouth/electives catalogue online?

Word of mouth

- Word of mouth [x 6]
- Colleague.

From medical students

- “Through students who previously did an elective.”
- “From other medical students that knew public health well.”
- “Medical students have held public health events and meetings in the past.”
- “From other medical students that knew public health well. After that, it took a bit of resourcefulness.”
- “Another medical student who worked in public health before beginning medical school.”

From PH practitioner

- “There were a few other interesting opportunities that were not advertised anywhere that I became aware of through word-of-mouth from public health physicians.”
- “It was word of mouth from a practitioner in the field.”

Searching — online/electives catalogue

- Electives catalogue/elective database/online elective catalogue [x 19]
- “It’s pretty easy to find a PH elective due to the online elective catalogue.”
- “Local public health elective was advertised through the school’s elective catalogue.”
- “American public health research elective was advertised on the school’s website.”
- “Medical school databases; Searched data bases”
- “I also found them sporadically through catalogues.”
- Faculty website
- Electives portal
- “Most of the opportunities were advertised on the schools' public and/or internal websites, but the advertisement was not really complete and did not give an accurate scope of the
tasks and learning to be accomplished, making it very unlikely to be enticing for medical students.”

- “I was interested in the field, so I went looking for opportunities. For one, the contact was advertised on the school web site. For the other, I applied for the elective through the school — I think it was listed as an option on their web site again.”

- “I found out about the specialty through the RBC Residency Guide. Before that I didn’t recognize it as a separate specialty, despite having a relatively good population health curriculum taught by a PHPM specialist.”

- “I researched a public health elective through elective database.”

- “I did hear about those [HIV and Aboriginal health electives] through my school (specific groups leading the electives presented in my class and sent out emails), as well as browsing the electives catalogue.”

### Self-initiated

- “Most of my electives were self-initiated in that I directly contacted the physician or MOH with whom I wanted to work.”

- “I sought it out specifically by speaking with various faculty in the Public Health department. There were no catalogue lists for PH as far as I can recall.”

- “I had to pursue it independently online, and approach the program directors at various sites.”

- “I am interested in applying to the PHPM residency program so I had to seek out these opportunities on my own.”

- “Through contacts”

- “I arranged it myself through contacting relevant professors.”

- “Personally I went searching for public health electives.”

- “Public health electives were not generally advertised. I did one short elective in medical school, but I sought out an MHO on my own.”

- “Checking the CaRMS website for which provinces had public health programs and contacting the administrative assistants.”

- “Personal interest”

- “I arranged it myself through contacting relevant professors.”

- “Word of mouth and because I had pre-standing interest in area (thus sought out the opportunity)”

- “I organized it on my own because I knew someone in the field.”

- “I organized my rotation on my own.”

- “I also contacted an MOH at a smaller PHU to set up my own elective. This was more work but still an easy experience overall.”

- “By contacting the public health unit in the region of interest.”

- “Personal interest. Sought it out on my own. Had already travelled in developing countries as an undergrad and was interested in global public health issues.”

- “Through independent research.”
“It was an elective I organized myself through a professor that does public health work in Africa.”
“Previous undergraduate research.”
“International opportunities through contact with professors of global health.”
“Organized the local and provincial ones through the university websites and contact with professors.”

**Mandatory experiences**

- “I am from India. We had mandatory public health rotations as well as teaching sessions through the first three years of medical school.”
- “It was mandatory.”
- “During my mandatory rotation in public health, the organizer of the rotation mentioned about the existence of elective rotations.”

**Other comments**

**Concerns re: lack of knowledge re: PH**

- “When I spoke to my dean 3 years ago when I was in 1st year, the dean did not even know our school offers the PHPM residency.”
- “Our school offers an elective which is posted on the electives catalogue, but for some reason plenty of students still do not know it exists and it is also not very clear what skills you will develop that will benefit a clinical career.”
- “Many MD professors that we have lecturing do not even know that PHPM is a medical specialty, and it is very difficult to learn about what is available or hear what are good options to pursue these interests.”

**Opportunities have improved.**

- “At my home school it is now easy to set up an elective as the AMOH is really pushing for med students to attend electives. It’s wonderful. Sometimes there are 3 med students at a time, but it’s a great experience and never feels crowded. There is a new admin person in charge of the elective students and this has made a huge difference. I applied a year ago to the elective and it was very difficult (no reply for over a month with multiple inquiries, replies that listed the wrong student and or dates, etc.). It’s a much smoother process now!!”
- “Finding an elective was challenging. It may have gotten better now that the specialty is called Public Health instead of Community Medicine. Most elective coordinators I spoke to weren’t aware there was a ‘community medicine’ elective different from Family Medicine.”

Please provide a brief description of your public health elective experience (e.g. scope of work, activities/meetings involved in, skills gained).

**Scope of work**

**Broad scope**

- “‘Taster’ style elective, exposed to wide variety of programming and sites ranging from childhood immunizations in rural site to central provincial admin of cancer screening programs (and wide variety in between). [...]”
o “Observed vaccination clinics, restaurant/pool/daycare inspections, and sexual health clinics; attended lots of different meetings; participated in research projects.”

o “Resident rounds, shadowing PH staff, attend Board of Health meeting, literature review, input into organizational plans, etc. Very different at each PHU, but a great experience at each.”

o “Spent time at a local health unit, shadowing medical officers of health and going to informational sessions with employees of the health unit (organizer of smoking cessation program, food inspectors, etc.)”

o “Local public health elective: visiting ground-level public health services (audiology, food and water inspections, immunization clinic), working on policy and reports, local advocacy (letter-to-editor writing). American public health research elective: applying a problem-solving-in-public-health framework to an issue — conducting and presenting this research, formal teaching in core principles of public health, audited MPH classes, toured State and Federal PH units.”

o “1. Project work, attend AHD
2. Meetings with various people, shadow MOH, projects
3. Meetings with various people, shadow different PH people - RNs, etc.”

o “I did a number of public health electives. In my first, it was much like shadowing at different departments of public health units (i.e. environmental health, tobacco control, CD, etc...)[...]

o “Local health unit (over 2–3 different electives): — shadowing health inspectors at inspections of pools, restaurants, barbers — shadowing public health nurses at home visits (healthy babies healthy children), immunization clinics, harm reduction clinics, sexual health clinics — meeting with the MOH/AMOHs — sitting in on meetings with MOH/AMOHs — presenting a lunch & learn on critical appraisal — conducting a rapid review for the health unit provincial — sitting in on F/T/P meetings — conducting a review/writing a brief article.”

o “2 weeks local public health with various experiences including accompanying public health inspectors and spending time at the public health clinic and travel clinic. [...]”

o “Broad range of exposures in various program areas. Shadowing of PHIs, meetings with managers in program areas, conversations and shadowing of MOHs. Completed projects for MOH supervisors.”

o “Learned about the role of a board of health. Learned about reportable diseases and the role of public health. Witnessed a number of services being delivered in the community (food inspection, home nursing). Sat in on a number of meetings pertaining to infection control and management of communicable disease. Prepared a report to answer a question locally about the benefit of a proposed public health initiative”

o “The work that I participated in was extremely varied and included: restaurant inspections, public pool inspections, water system inspection, drinking water security and treatment, air quality monitoring, community health presentations, communicable disease monitoring and prevention, models of harm reduction, government relations, maternal and child health, food security, indigenous health. I gained skills in advocacy and presentations.”

o “— Attending various meetings, i.e. outbreak management, research consultation — Visiting community public health programs, i.e. homeless shelters, safe injection sites, mobile needle exchanges, clinics for marginalized populations, occupational medicine — Having one on one meetings with experts; solely to teach you about their field! — Journal clubs, critical
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appraisal activities — Academic half days were highly valuable to meet the residency program — Self— directed reading and research in an area of interest — Creating a small deliverable over an elective that lasts a few weeks.”

- “Followed MHO in day-to-day meetings. Learned through 1:1 sessions about roles of public health physician (e.g. health protection, health promotion, disease promotion, partnerships, leadership). Conducted research work on global health research and local homelessness issue. Visited water treatment plants. Visited city council meetings”

- “1. [...] every day was a different exposure to a public health concept with visits to the travel, TB and STI clinics, shadowing an EHO, etc. [...] 3. [...] worked on a number of small projects [...]”

- “I essentially participated in a ‘field trip’ of public health during my elective, and was able to see all the aspects of a local public health unit. This included participating in executive meetings, meeting with the infectious control team, shadowing a health inspector, etc.”

- “I participated in a public health research, where I was the main investigator who was collecting, analyzing and reviewing data under the supervision of a public health physician. I had the chance to attend all professional functions of my supervisors in all experiences, and the skills that I gained from that great exposure are beyond the scope of medicine: communication, policy writing, dealing with the media, making a budget, etc.”

- “Worked with many professionals (health inspector, safety inspector, SLP, dentist, travel clinic). Great exposure to what they do in their respective professions.”

- “Attended meetings with city council and various focus groups. Met with several department heads to get a feel of the scope of public health practice.”

- “1st elective: observed public health programming, met with reps from many public health programs, attended AHD 2nd elective: attended meetings with MOH/AMOH, attend BOH meeting, lit review project, attending several PH services, met with reps from various programs 3rd elective: attended meetings with AMOH, project, met with reps from various program, worked with Communicable Disease Team re: Ebola”

- “Project based electives. Trained in research and critical appraisal skills. Worked in communicable disease control, harm reduction, and health promotion.”

- “Broad scope ... poison control, TB clinic, radon meeting, harm reduction, insite visit, MPH lectures”

- “Examples of activities over the course of more than one elective: literature reviews; report editing; writing of abstracts; creating presentations for health care professionals; observations at public health clinics/sites”

- “I spent 2 weeks. It involved going on inspections of daycares and restaurants, going to needle exchanges, attending lectures, taking part in a flu campaign, attending seminars with residents, etc.”

- “2 weeks spent in various clinics and shadowing various fields/areas of public health, including: — full day with tobacco control/reduction and smoking cessation program — full day with a MHO — full day with a food/water safety inspector — half day with InSite safe injection program — 2 half days in public health academic day — half day in travel medicine clinic — 2 half days with public free youth clinic — half day with child care licensing safety inspector — half day with health protection office”
“Health authority management meetings, ride-alongs with health inspectors, participation in HIV clinics, harm reduction”

“The first one was largely shadowing various services and [learning] what the services do. There were few meetings and sessions with my preceptor. Some other one-on-one [sessions] as well. I also attended a resident academic half day.”

“My internship was with a public health unit. I had to finish a research project and submit a document. I also attended group meetings in several fields and met doctors and nurses working in various public health fields: infectious disease, STBBI, breast cancer screening program, etc.” [Translated from French]

♦ Specific areas/focused electives

❖ Disaster management

“1) Working on the ebola response strategy. Creating weekly reports, drafting report, presenting our strategy at grand rounds
2) Research project in social media and disaster management- design and completion
3) Attended local programming-developed understanding of available supports”

❖ Communicable disease/outbreak

“[...] Subsequently my work became more focused as I sought out more project-specific work. I did an elective at a provincial unit and focused on infectious disease, for instance.” [previously did broader elective(s) in public health]

“Primary activity was an outbreak investigation. Maintained linelist. Conducted cohort study, etc. Also, worked on writing up the outbreak. Short time working on unrelated evidence review prior to going out on the outbreak.”

“[...] worked […] on a specific project for 3 weeks while participating in CDC and other areas of public health via meetings. […]” [previously did broader elective(s) in public health]

“Outbreak investigation with EIS team. Analysis of surveillance data related to H1N1. Attended meeting of ACIP.”

“I worked in several HIV/AIDS clinic for sex workers in Kenya. Most of my days were spent with a local doctor or clinician. I learned to use a speculum, about the Kenyan health care system, about STI’s and sex workers.”

❖ Aboriginal health

“[…] 2 weeks provincial public health with focus on aboriginal health including accompanying public health inspectors out to different first nations reserves and working in a methadone clinic” [previously did broader elective(s) in public health]

“Worked with PHAC-FNIHB. There was much independent time for reading. I did some trips out to reserves, which was a worthwhile and eye-opening experience, especially because the individuals I went with (a dietician on one occasion, and environmental officer of health on the other) were well-informed on First Nations issues and spoke with me about it.”

❖ Harm reduction

“Involved in harm reduction research actively engaged in the research Meetings”
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**Research**

- "I observed research team meetings for a current population study. I gathered data from publically available sources to compare trends between provinces. I performed a short literature review on a topic of interest."
- "Public Health elective in HIV research. 80/20 split research and clinical activities. Worked with one primary supervisor on a research topic of interest to do a brief literature search and review. [Compiled] results into a paragraph to be used in future presentations and publication."
- "HIV research and clinical care. Conducted small research project estimating the population size of MSM and attended research meetings. Also attended academic half-days and discussed the structure of public health in BC and Canada."
- "Data collection for a public health research project associated with the WHO Interdisciplinary meetings. Skills in research, critical analysis of evidence-based data, global health approach." [Translated from French]

**Environmental health**

- "It was in environmental health, about housing sanitation and indoor air quality. I attended and was involved in several partnerships, meetings and training sessions." [Translated from French]
- "I did an internship in environmental health. I conducted clinics at the institute of pulmonology. I took part in home visits to dwellings with sanitation issues. I participated in meetings with organizations. I did an epidemiological study, assisted by a resident." [Translated from French]

**Breadth unclear**

- "Did a brief online course, surveyed numerous programs offered at the local level, participated in a research project handed over from previous elective students"
- "Health promotion - youth engagement in healthy communities, cancer survivorship. Worked with a lab on research projects. Gained some understanding of health determinants and complexity of supporting social change."
- "Participated in all daily activities performed by supervising MHO. Also spend time with environmental health officers and public health nurses."
- "Participated in projects to gain skills in public health."
- "Job shadowed the different PH doctors through their day. Primarily observational. Did get to participate in an outbreak investigation and attend the resident academic half day which was beneficial."
- "Mostly involved meetings and field trips. I don’t think I gained any particular skills."
- "Overview of programs through meetings with managers. Spoke with AMOHs about their roles. Attended Board of Health Meeting."
- "Both electives were quite similar. They involved mostly meetings and a limited amount of clinical time in relevant areas such as newborn follow up and travel health. The meetings consisted of some one on one meetings with experts in different areas and larger meetings follow various projects that happened to be occurring while I was doing my electives."
- "Involved in report making, community outreach, attended meetings."
“It was interesting experience with field trips and lectures supporting the activities of public health.”

“Attending meetings, doing a literature review, participating in site visits/half-day visits to public health-run services/programs.”

“Lectures in community medicine. Field visits: water treatment facility, abattoir inspection, food processing facility, etc.”

### Activities/meetings involved in

**◆ Specific meetings identified**

<table>
<thead>
<tr>
<th>Meeting Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-on-one with experts/physicians/staff</td>
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<tr>
<td>Research meetings</td>
<td>4</td>
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<tr>
<td>Board of Health meeting</td>
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<tr>
<td>Local programming</td>
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<tr>
<td>Infection control</td>
<td>2</td>
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<tr>
<td>Communicable disease management</td>
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<tr>
<td>City council meetings</td>
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<tr>
<td>Executive/management meetings</td>
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<tr>
<td>Employee information sessions</td>
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<td>Federal/Provincial/Territory meetings</td>
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<tr>
<td>Advisory Committee on Immunization Practices</td>
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<tr>
<td>Focus group meetings</td>
<td>1</td>
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<tr>
<td>Environmental health meetings</td>
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</table>

**◆ Specific activities mentioned**

<table>
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<tr>
<th>Activity Description</th>
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<tr>
<td>Research projects</td>
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</tr>
<tr>
<td>Restaurant/pool/daycare inspections/work with health inspectors</td>
<td>13</td>
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<tr>
<td>Shadowing — other PH staff</td>
<td>11</td>
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<tr>
<td>Rounds/AHD/journal club</td>
<td>10</td>
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<tr>
<td>Harm reduction</td>
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<tr>
<td>Environmental health/health protection</td>
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<tr>
<td>Rapid review/evidence review/literature review</td>
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<tr>
<td>Attended courses/lectures (online or in person)</td>
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<tr>
<td>Communicable disease</td>
<td>7</td>
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<tr>
<td>Developed reports/contributed to reports/edited reports</td>
<td>7</td>
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<tr>
<td>Shadowing — MOH/PHPM doctors</td>
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<td>Projects</td>
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<td>Tour of facilities/site visits</td>
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<td>Sexual health</td>
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<td>Travel clinic</td>
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<td>Childhood immunizations/immunization clinics</td>
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<td>Elective</td>
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<td>----------------------------------------------</td>
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<td>HIV clinics</td>
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<td>Prepared/gave presentations</td>
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<tr>
<td>Data analysis</td>
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<td>Global health</td>
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<td>Health promotion</td>
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<tr>
<td>Indigenous health</td>
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<tr>
<td>Maternal child health</td>
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<td>Outbreak investigation</td>
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<td>Smoking cessation program/tobacco control</td>
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<tr>
<td>TB/Respirology clinic</td>
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<tr>
<td>Work with marginalized populations</td>
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<tr>
<td>Youth/community engagement/outreach</td>
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<tr>
<td>Cancer screening</td>
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<tr>
<td>Home public health nurse visits</td>
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<tr>
<td>Independent reading</td>
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<tr>
<td>Shadowing — unclear who</td>
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<tr>
<td>Visits to First Nations reserves</td>
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<td>Adolescent medicine</td>
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<td>Advocacy work</td>
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<td>Audiology</td>
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<td>Cancer survivorship</td>
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<td>Disaster management</td>
<td>1</td>
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<tr>
<td>Food security</td>
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</tr>
<tr>
<td>Government relations</td>
<td>1</td>
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<td>Occupational medicine</td>
<td>1</td>
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<td>Organizational plan</td>
<td>1</td>
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<tr>
<td>Poison control</td>
<td>1</td>
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<tr>
<td>Scan/survey of programs</td>
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</tbody>
</table>

Skills gained

◆ Research skills
  o “Applying a problem-solving-in-public-health framework to an issue — conducting and presenting this research”
  o “Research project in social media and disaster management - design and completion”
  o “Literature review”
  o “Conducting a rapid review”
  o “Worked with a lab on research projects.”
  o “Self-directed reading and research in an area of interest.”
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- “I participated in a public health research, where I was the main investigator who was collecting, analyzing and reviewing data under the supervision of a public health physician.”
- “Trained in research and critical appraisal skills.”
- “I observed research team meetings for a current population study. I gathered data from publicly available sources to compare trends between provinces. I performed a short literature review on a topic of interest.”
- “Conducted small research project estimating the population size of MSM and attended research meetings.”
- “Data collection for a public health research project associated with the WHO. Interdisciplinary meetings. Skills in research, critical analysis of evidence-based data, global health approach.” [Translated from French]

♦ Planning skills
- “Working on the Ebola response strategy.”
- “Input into organizational plans.”
- “The skills that I gained from that great exposure are beyond the scope of medicine: communication, policy writing, dealing with the media, making a budget, etc.”

◊ Communications skills (writing and presentations)
- “Creating weekly reports, drafting report, presenting our strategy at grand rounds”
- “Presenting this research”
- “Presenting a lunch & learn on critical appraisal”
- “Conducting a review/writing a brief article”
- “I gained skills in advocacy and presentations.”
- “The skills that I gained from that great exposure are beyond the scope of medicine: communication, policy writing, dealing with the media, making a budget, etc.”

◊ Improved knowledge/understanding of public health issues
- “Gained some understanding of health determinants and complexity of supporting social change.”
- “Learned about the role of a board of health. Learned about reportable diseases and the role of public health.”
- “I learned to use a speculum, about the Kenyan health care system, about STI’s and sex workers”

◊ Outbreak investigation skills
- “Maintained linelist. Conducted cohort study, etc. Also, worked on writing up the outbreak.”
- “Outbreak investigation with EIS team.”

◊ Advocacy
- “Local advocacy (letter-to-editor writing)”
- “I gained skills in advocacy and presentations.”
- “[...] the skills that I gained from that great exposure are beyond the scope of medicine: communication, policy writing, dealing with the media, making a budget, etc”
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✧ Epidemiology skills
  o “Analysis of surveillance data related to H1N1.”
  o “I did an epidemiological study, assisted by a resident.” [Translated from French]

✧ Clinical skills
  o “I learned to use a speculum.”

✧ Understanding of public health system
  o “Discussed the structure of public health in BC and Canada”

✧ Does not feel learned/gained skills
  o “Mostly involved meetings and field trips. I don’t think I gained any particular skills.”

Q What was your FAVOURITE part about your public health elective?

◆ Meeting professionals in the field and learning about the role of the PH physician
  o “Getting to meet a diverse number of staff […] from a wide variety of backgrounds and expertise […]”
  o “Meeting with PHPM physicians and chatting with them about their career experiences.”
  o “Talking to the MHO about a wide diversity of topics.”
  o “Exposure to a PHPM specialist and seeing what they do in their career: this is such a black box in the rest of the curriculum! In my favourite PHPM, a great strength was that PHPM specialists were organized to come in for discussions regarding their area of expertise with a small group of students that were all on elective at the same time. They were obviously excited to teach and you really felt that they would be valuable mentors in the field; even in meeting us once or twice, they were interested in our career paths and creating opportunities to help us meet our goals.”
  o “Hearing about past projects and experiences from public health officers.”
  o “[…] meetings with my preceptor to understand what he did”
  o “Working with passionate professionals in the field.”

◆ Engaged in project work (presentations)
  o “Presenting at grand rounds”

◆ Engaged in project work (research)
  o “Working on public health research projects”
  o “Having the opportunity to work on a small project and taking some ownership of the experience”
  o “Being able to conduct my own research”
  o “Being involved in applied public health research”
  o “I enjoyed the public health projects that I was involved in”
  o “Being able to contribute to a project”
  o “Assisting with research teams and outbreak mgmt”
Public Health Electives for Medical Students: Recommendations and Survey Analysis

♦ Overall positive experience (no specifics)
  o “EVERYTHING!”
  o “All of it”
  o “I loved all parts of the course”

♦ Exposure to public health
  (outbreak investigations, non-clinical work, environmental health, harm reduction, clinical)
  ✦ Diversity
    o “All the variety of information about what people employed by public health do day-to-day”
    o “Seeing current programs being offered”
    o “Working and being exposed to the breadth of public health practice”
    o “Exposure to many areas of public health”
    o “Seeing the various aspects of the field”
    o “I also enjoyed seeing a range of aspects of public health.”
    o “Broadening perspective regarding aspects of public health”
    o “Broad exposure”
    o “Being immersed in PH”
    o “Learning about programs [...]”
    o “[...] the variety”
    o “The broad scope I was shown. Doing something new every day.”
    o “The diversity and exposure to the scope of public health”
    o “Coming into contact with the world of public health”
    o “The variety was interesting”
    o “The diversity of subjects”
  ✦ Harm reduction/clinical work
    o “Working in the methadone clinic with a public health doctor”
    o “Insite and harm reduction”
    o “Harm reduction campaigns”
  ✦ Outbreak investigations
    o “The outbreak investigation. That made me realize how much I liked PH work compared to clinical work.”
  ✦ Non-clinical work
    o “Being able to get involved in other fields than medicine, such as economics, policy making, epidemiology, sociology, psychology, etc.”
    o “Just being away from a clinical setting in the community.”
  ✦ Environmental health
    o “The health inspection of restaurants”
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≠ Engaged in decision-making
  o “Seeing evidence-informed decision-making in action”
  o “Seeing city council pass the recommendations from homelessness task force!! By far the coolest experience!”
  o “City council meetings”
  o “Seeing new policies being made”
≠ Understanding of public health concepts
  o “Considering health determinants”
  o “Identifying the long term vision in PH”
≠ Practical experience
  o “Field work”
  o “Field trips” [x 2]
  o “Visiting different sites”
  o “[...] home visits [...]”
≠ Aboriginal health experience
  o “Visiting the reserves”
≠ Participation in discussions (about PH topics)
  o “Listening to discussions”
  o “Discussions with preceptor”
≠ Learning about methodology in PH
  o “Learning about [...] public health methods”
≠ Meeting community stakeholders
  o “Meeting with community groups involved in the community-based research”
  o “[...] meeting with the agencies”
≠ International experience in PH
  o “Experiencing health care in a different country”

Q What was your LEAST favourite part about your public health elective?

≠ Difficult logistics
  o “Logistics ...The number of locations was large and the weather poor, making transit very difficult at times.”
  o “Sometimes the disjointed nature of the experience - i.e. just shadowing at a different place every half-day.”
≠ Lack of engagement/contact from preceptor
  o “Lack of enthusiasm for learners by some staff I was paired with was evident, but hard to think that all staff could be enthused all the time for med students. Still, important consideration for elective administrators.”
  o “Lack of direct preceptor contact”
“The quality of the elective is very dependent on how much effort the organization puts into creating it; they really have to be dedicated to medical education, and in my opinion it shows that some places simply do not have the personnel to spare and/or people are not being hired specifically to improve public health education (i.e. it's a thing they do on the side when/if they have time).”

“[…] less supervision than would be ideal.”

Felt unable to contribute/lack of meaningful learning at times (i.e. meetings).

“Difficulty contributing to the organizations because public health operates on a much longer timescale than clinical medicine.”

“Sitting in on meetings which I did not feel that I was able to contribute to, nor did I feel I was learning from (ex. MHO HR meetings).”

“Long, boring meetings with little/no debrief before/after”

“Limited opportunity to integrate meaningfully into work (partially applied to residency training as well).”

“Working on the evidence review unrelated to the outbreak.”

“Being part of meetings where I was not oriented to the scope or purpose.”

“Sitting in on meetings”

“The lack of possibilities for medical students to accomplish tasks: I had to fight my way into it, especially if I wanted more high-profile tasks such as initiating a research project.”

“At one elective all I was given to do was to do a presentation of my own choosing and some field trips. Doing a presentation is always useful for practice but it was unnecessary as it was on any topic that I wanted to present on, not on work that I did on the elective which would have been more useful. At this elective I did not get an idea of the public health activities in that region.”

No concerns mentioned

“Nothing. Seriously, I love PH.”

“I enjoyed it all.”

“None” [x 2]

“There was none”

Not enough time in the elective

“I wish I'd gotten the chance to take on a small project myself during the elective. However, since I was only there for 2 weeks, there wasn't time to do that.”

“I felt that the longer the elective, the more valuable it was. For example, where I only spent 2 weeks in a particular setting, I found it a challenge to engage in any meaningful work beyond shadowing public health staff.”

“How tight my time was as a student. I would have liked to schedule more electives, but it was so hard to find them and it didn't seem wise to schedule more of them given how many other things I needed to do and learn during my elective time.”

“It would have been nice to participate in a project, though I understand this would be difficult given the short amount of time I had (2 weeks).”

“It is difficult to get a research project completed in just 4 weeks.”
“It was too short (4 weeks).”

**Too much free time**
- “Lots of dead time.”
- “There were a few occasions where my meetings were cancelled last minute and I had nothing to do for a couple of hours.”

**Lack of relevance to the role of the physician**
- “Shadowing non-MOH, non-physician people. Once you have followed one RN to a vaccination clinic that is enough.”
- “Distance removed from clinical medicine, lacked physician leadership.”
- “Just meeting with a bunch of different organizations, services; no real exposure to what day-to-day for a public health doctor is like.”
- “Too much observership, while it was good exposure to PH, I learned very little about the role of PH physicians.”
- “Lacked clear guide for how GPs interact with PH.”
- “Sitting in on meetings with little/no context or responsibility.”
- “Shadowing. It was boring (sitting through an immunization clinic and just watching is just watching the same thing over and over again). It also did not help me in any way understand what I would do as a PHPM specialist.”

**Not feeling prepared**
- “Meeting various MHOs or public personnel without knowing what to expect or how to prepare.”

**Scope of project too ambitious**
- “I wouldn’t recommend working on a larger scale project unless in 3rd year of medical school. By 4th year there is not enough time to complete a project with CaRMS in the background.”

**Lack of structure**
- “At times, it felt a little too unstructured. They provided me with a binder of articles to read, so I probably spent a third to half my time doing that. I don’t think I got a very good appreciation for what it means to be involved in public health.”
- “Less structured than many clinical electives. […] I feel like structure and the identification of a clear purpose are really important in giving medical students a positive impression of PH. […]”

**Lack of hands on/practical experience**
- “Too observational, not enough hands on experience.”

**Not enough teaching experiences with preceptors/residents**
- “Teaching sessions with supervisors/residents would also have been nice.”
- “The aspect that could be improved would have been more set teaching time by faculty or residents on basic frameworks in public health.”

**Menial tasks (data processing, literature reviews )**
- Data processing, long meetings, literature reviews
  [No specifics provided, these terms were merely listed]
♦ Residents not approachable
  o “The residents were not friendly and were intimidating.”

♦ Feeling overwhelmed in a complex organization
  o “Learning the function of a public health organization in 2 weeks can be overwhelming.”
  o “Bureaucracy”

♦ Too much didactic teaching
  o “Too many lectures.”
  o Lectures [x 2]
  o “The lecture periods, because there weren’t always active projects.”

4.2 Program Director Questions

Q If a medical student wanted to set up an elective in public health at your faculty of medicine, what opportunities are available?

♦ Broad/general/unspecified public health opportunities
  o “Minimum 2 week rotation up to 6 weeks”
  o “Local public health, provincial public health; research and other types if organizations lower availability”
  o “Public health practice at the local or provincial level Research Policy”
  o “Connected with four health regions within [Province] and have preceptors that are Ministry of Health doctors”
  o “All aspects of public health and preventive medicine”
  o “Public health practice, policy development, evaluation, epidemiology”
  o “There are internships available with learning objectives for senior medical students”
  o “Placements in community organizations and internationally”
  o “The student is paired with a teacher who does work on various issues related to his practice. The student also participates in public health activities in other sectors. All these activities may include: a step of a research project (data analysis, copy writing), clinical preventive medicine, conferences/book clubs, discussions with the multidisciplinary team to understand the demands of front line professionals.”

♦ Working with MOH/AMOH
  o “1 month "selective" option in a Regional Health Authority under the preceptorship of the Medical Officer of Health.”
  o “I can only speak to making an annual "posting" of a potential student rotation in public health with my office.”
  o “Opportunities are available through the undergraduate program. This usually involves a 2-4 week elective in Population and Public Health.”
  o “An elective may be offered as part of the local ID department.”
♦ Observership/show and tell rotations
  o “They can do rotations at the local public health unit and observe our core business such as restaurant inspections, child health clinics, STI clinics, etc.”

♦ Customizable opportunities
  o “We receive requests for medical student electives and try to tailor each elective experience to the medical student.”

♦ Not specifically involved in setting up electives
  o “I am not involved in setting up electives, but I would suggest contacting the Program Director, and I would also suggest specific practitioners who might be a good match for a student based on their interests and goals for the elective.”
  o “Local health units, research with faculty, provincial organizations”
  o “Many opportunities which the PD can describe. I oversee at one site. Take med students for 2-4 weeks from across Canada.”

Q What do you think makes a public health elective a great experience for medical students?

♦ Interactions with MOHs/residents through mentorship/meetings
  o “[...] lots of interaction with public health physicians and other disciplines, field visits (e.g., food premise inspections) [...]”
  o “Opportunities to connect with people in public health practice”
  o “Networking”
  o “Able to sit in on other meetings and conference calls”
  o “One-on-one meetings with MHOs to discuss the career”

♦ Core components in the rotation
  o “Showing them core public health business”

♦ Helping students to understand what is public health and its relevance to medicine
  o “Students see the relevance of the academic material related to population health, provides another perspective on medicine, chance to see the opportunities of a public health practice.”
  o “Opportunity to learn more about public health practice”
  o “Understand the use of medicine at the local public health level”
  o “Getting to see what PH physicians do on a day-to-day basis. Seeing the breadth of the field and the impact of our work.”
  o “Increase the awareness of the role of public health to ensure that no matter what specialty is pursued, the student is able to make good use of public health services in the community that they work.”
  o “From my perspective there are two goals for PH electives:
    1. To provide an experience for medical students to help them decide and get into a PHPM residency programs.
    2. To familiarize medical students with public health concepts, systems etc...for use in their careers in various other specialties. These need to be different electives, with different objectives...and to be honest, even as a PD, its #2 that is more important in my mind.”
"It provides a good overview of what later practice in PH would look like... so as to attract eventual residents.”

“Highlighting how medical training integrates with public health”

“[...] offered a general look at the field and the possible concrete roles within public health”

“[...] to gain an understanding of the roles/dimensions”

“Complementing the mandatory internship, it allows the student to experience the daily work of the physician working in public health. It distinguishes the roles played by the family doctor and those of the specialist physician.”

**Having clear rotation objectives**

“Clearly defined objectives to achieve during the time frame. Clear activities to undertake during the rotation (I have a list of "visits" combined with a set of learning activities that we discuss at the start of the rotation).”

**Adapt the evaluation of a student to better reflect public health context.**

“It would also help to have an evaluation form that reflects working with populations and not working with individual patients.”

**Diversity of exposure to public health**

“There are so many various career paths that can be chosen = occupational; environmental, etc.”

“The ability to be exposed to a wide variety of issues but also at different levels of jurisdiction i.e., regional, provincial, national.”

**Opportunities for project work and to get involved**

“Hands on experience and have a specific output/project.”

“[...] Opportunity to publish”

“Giving them a small project [...]”

“If the students are afforded an opportunity to be involved in the core functions of a public health unit”

**Flexible learning opportunities**

“Plenty of opportunity to attend lectures as wishes — student can choose what to attend.”