Documenting the Current State of Palliative Care Clinical Rotations in Canadian Medical Schools

FINAL DRAFT FOR REVIEW BY POSTGRAD CTTEE
If you have comments send them to Kim Taylor ed@cspcp.ca by January 3, 2019
It will go to the CSPCP Board on January 11th.

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1. Introduction

1.1 Lack of training, workforce and access to palliative care

Evidence has shown that palliative care is appropriate at any age and at any stage in a life-threatening illness, and can be provided along with curative treatment (1). Palliative care aims at giving patients and those close to them the best possible quality of life and providing them with the support they need (2-5).

The delivery of palliative care is a shared responsibility among all health professions and within all fields of medicine. To provide quality palliative care, we must ensure that all health care professionals, including physicians and specialists, have the appropriate training. However, evidence shows that only 25-30% of practicing physicians feel comfortable in providing palliative care (6). Evidence also suggests lack of a trained workforce and lack of access to palliative care (7). A national survey conducted in 2016 concluded that availability of palliative care services in Canada depends on “where you live, how old you are, and what you are dying from” (7). To build the required palliative care workforce to meet current and projected needs, all physicians should receive some training in palliative care (8). Training should take place at both the undergraduate level and postgraduate level (9).

Palliative care medical education is one of the priorities of the Canadian Society of Palliative Care Physicians (CSPCP). The CSPCP chairs standing committees for undergraduate and postgraduate education that include representatives from the 17 medical schools in Canada. The medical school representatives from these committees report that the demand for palliative care electives, residency positions and postgraduate clinical rotations exceeds capacity. In addition, it was suspected that the groups of learners who would benefit from palliative care electives are not currently requesting them.

To date, access to undergraduate and postgraduate palliative care clinical rotations in Canadian medical schools has not been properly documented. Therefore, the standing committees asked the CSPCP to coordinate collection and reporting of national data on the current state of clinical palliative care rotations in Canada at the undergraduate and postgraduate levels. Results of this collection are presented here to guide future planning, decision making and priority setting.

1.2 Evolution of palliative care training in Canada

It has been recognized by many organizations that palliative care skills should be taught during initial medical training and specialty training, as well as to physicians who are already in practice. In August 2013, the Canadian Medical Association adopted a resolution requesting “…that all Canadian faculties of medicine create a curriculum for training in palliative care suitable for physicians at all stages of their medical education and in appropriate settings to the locale in which they practice” (10).

To date, national palliative care competencies were defined for the undergraduate level, but were not implemented in all medical schools’ curricula. At the postgraduate level, national palliative care competencies were not developed for the majority of medical education programs. Definition of standardized competencies in palliative care for all
postgraduate non-palliative specialty and subspecialty training programs is underway, through the CSPCP Palliative Approach to Care Education (PACE) project, which is also being coordinated by the CSPCP.

Besides the basic training in palliative care, additional clinical training can be obtained through a variety of non-certified, short clinical fellowship programs in palliative care, or through additional postgraduate level electives during residency training. For those teaching palliative medicine or for those involved in palliative medicine research, advanced palliative care skills are required. In Canada, two certified programs of study for palliative care medicine were recently accredited:

1. Since 2013, a Fellowship of the Royal College of Physicians of Canada in Palliative Medicine (FRCPC-PM), a two-year subspecialty program with multiple routes of entry through the Royal College of Physicians of Surgeons of Canada, can be completed. This program focuses on the development of competencies such as complex symptom management for all types of end-stage disease and development of academic leadership skills in the areas of program development, education and research in Palliative Medicine.

2. Since 2014, a Certificate of Added Competence in Palliative Care (CAC-PC) can be obtained through the College of Family Physicians of Canada. This program is focused on the development of clinical competencies for complex symptom management in palliative care.

Finally, continuing medical education in palliative care can be done through advanced or intermediate level conferences, webinars and online courses.

1.3 Current state of palliative care clinical rotations in Canada

Over the past two years, the CSPCP has been conducting a pilot study to determine the feasibility of collecting data on palliative care clinical rotations. Early data suggested that access to undergraduate and postgraduate palliative care clinical rotations is inconsistent across schools, and overall insufficient. Based on these preliminary results, the CSPCP proceeded with this descriptive study to quantify the current state of palliative care clinical rotations in Canada and to determine whether changes have taken place over the past decade.
2. Objectives

To inform future decision making by Canadian medical schools, health authorities and governments, the specific objectives of this project are:

For undergraduate level training:

1. To determine the number of Canadian medical schools offering mandatory or optional palliative care clinical rotations;
2. To estimate the proportion of undergraduate trainees completing palliative care clinical rotations annually;
3. To measure the national variability and changes over time for palliative care clinical rotations.

For postgraduate level training:

1. To determine the number of Canadian medical schools offering a subspecialty in palliative medicine and the number of residents completing it annually;
2. To determine the number of Canadian medical schools offering added competency training in palliative care and the number of residents completing it annually;
3. To determine the number of residency training programs including mandatory or optional palliative care clinical rotations;
4. To estimate the proportion of postgraduate trainees completing palliative care clinical rotations during their residency;
5. To measure the national variability and changes over time for palliative care clinical rotations.

3. Methods

All Canadian medical schools (n=17) were invited to participate in this study. A pre-identified representative from each medical school was asked to fill out a data collection form provided by the Canadian Society of Palliative Care Physicians. For the undergraduate level, Canadian medical schools were asked to provide data for the 2008-2016 period (academic years). For the postgraduate level, data was collected for the 2008-2017 period (academic years). Data collection included the following information:

1. Type of palliative care clinical rotations offered (mandatory, optional);
2. Length of palliative care clinical rotations offered (in weeks);
3. Number of medical students enrolled each year;
4. Number of medical students completing palliative care clinical rotations;
5. Number of residents completing added competency training in palliative care;
6. Number of residents completing palliative care clinical rotations by program specialty or sub-specialty.

Data was compiled and analyzed using Microsoft Excel® 2013. Descriptive statistics are presented.
4. Results

About half of the responding schools were able to use the provided data collection form. The other responding schools provided data in other forms which were used to fill the validated datasheet. As many schools were unable to provide the exact number of students enrolled in their final year for some programs, we used reports from the Canadian Post-MD Education Registry (CAPER) and the Association of Faculties of Medicine of Canada (AFMC) as a standardized data source.

4.1 Results for Undergraduate

Data for undergraduate students was received from 15 of the 17 Canadian medical schools for at least one year of the 2008-2016 period. Of those 15 schools, two schools reported that they did not offer any clinical palliative care clinical rotations at the undergraduate level.

4.1.1 Mandatory and optional clinical rotations in palliative care in Canadian medical schools

In order to determine the number of Canadian medical schools offering mandatory or optional palliative care clinical rotations, we combined data from three sources: data provided from the responding medical schools, curriculum information found on their faculty website and reports from the AFMC. As a result, we confirmed that two of the 17 Canadian medical schools (12%) did not offer any palliative care clinical rotations to their undergraduate students in 2017 (Figure 1). Thirteen medical schools (76%) made it available on an optional basis, whereas 2 medical schools (12%) included palliative care clinical rotations on a mandatory basis (one since 2015).

Figure 1. Percentage of Canadian medical schools offering palliative care clinical rotations to undergraduate trainees in 2016

4.1.2 Undergraduate trainees completing clinical rotations in palliative care

As shown in Figure 2, 689 (27%) of 2527 students registered in their last year of medical training completed palliative care clinical rotations in 2016 among the responding medical schools (n=15).
Figure 2. Percentage of undergraduate trainees who completed palliative care clinical rotations in 2016 among responding medical schools (n=15)

Of the 27% (689 students), 447 (65%) completed palliative care clinical rotations in the two medical schools including mandatory palliative care training (Figure 3).

Figure 3. Type of palliative care clinical rotations completed by undergraduate trainees in 2016 among responding medical schools offering such training (n=13)

4.1.3 National variability and changes over time for palliative care clinical rotations

As shown in Figure 4, the percentage of undergraduate trainees completing palliative care clinical rotations changed over time among the 15 responding medical schools. In 2008, 23% of undergraduate trainees completed palliative care clinical rotations according to available data. In 2011, the percentage was at its lowest with only 14% of undergraduate having been trained in palliative care. A peak of 31% was then reached in 2015. When excluding the two responding medical schools offering mandatory rotations, the percentage of trainees in palliative care is gradually improving throughout the whole period, with twice the number of trainees in 2016.
When looking at the individual data received from the 13 responding Canadian medical schools including training in palliative care, the percentage of trainees completing palliative care clinical rotations is either stable or improving throughout the 2008-2016 period (Figure 5).

Figure 5. Percentage of undergraduate trainees completing palliative care rotation among the 13 responding Canadian medical schools offering such training (according to available data)
<table>
<thead>
<tr>
<th>Year</th>
<th>Medical school E</th>
<th>Medical school F</th>
<th>Medical school G</th>
<th>Medical school H</th>
<th>Medical school I</th>
<th>Medical school J</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>2%</td>
<td>9%</td>
<td>7%</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>2010</td>
<td>0%</td>
<td>6%</td>
<td>5%</td>
<td>2%</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>2011</td>
<td>8%</td>
<td>15%</td>
<td>11%</td>
<td>6%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>2012</td>
<td>4%</td>
<td>20%</td>
<td>3%</td>
<td>6%</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>2013</td>
<td>9%</td>
<td>21%</td>
<td>4%</td>
<td>14%</td>
<td>10%</td>
<td>3%</td>
</tr>
<tr>
<td>2014</td>
<td>15%</td>
<td>20%</td>
<td>4%</td>
<td>13%</td>
<td>14%</td>
<td>4%</td>
</tr>
<tr>
<td>2015</td>
<td>33%</td>
<td>17%</td>
<td>3%</td>
<td>14%</td>
<td>100%</td>
<td>7%</td>
</tr>
<tr>
<td>2016</td>
<td>15%</td>
<td>15%</td>
<td>18%</td>
<td>14%</td>
<td>100%</td>
<td>16%</td>
</tr>
</tbody>
</table>
4.2 Results for Postgraduate

Data for postgraduate level was received from 13 of the 17 Canadian medical schools for at least one year of the 2008-2017 period. Among those, one school provided combined data for the 2008-2017 period and another provided data for the 2016-2017 year only.

4.2.1 Canadian medical schools offering a subspecialty in palliative medicine program

Between 2008 and 2016, 196 trainees have graduated from a Palliative Medicine training program in Canadian medical schools (Table 1). One medical school trained the most residents (n=32), followed by medical schools training 26, 26 and 21 residents respectively.

Table 1. Number of Palliative Medicine trainees between 2008 and 2016 (by medical school)

<table>
<thead>
<tr>
<th>Medical schools</th>
<th>Number of trainees</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical school A</td>
<td>8</td>
<td>4.1</td>
</tr>
<tr>
<td>Medical school B</td>
<td>12</td>
<td>6.1</td>
</tr>
<tr>
<td>Medical school C</td>
<td>21</td>
<td>10.7</td>
</tr>
<tr>
<td>Medical school D</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Medical school E</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Medical school F</td>
<td>15</td>
<td>7.7</td>
</tr>
<tr>
<td>Medical school G</td>
<td>11</td>
<td>5.6</td>
</tr>
<tr>
<td>Medical school H</td>
<td>14</td>
<td>7.1</td>
</tr>
<tr>
<td>Medical school I</td>
<td>5</td>
<td>2.6</td>
</tr>
<tr>
<td>Medical school J</td>
<td>26</td>
<td>13.3</td>
</tr>
<tr>
<td>Medical school K</td>
<td>13</td>
<td>6.6</td>
</tr>
<tr>
<td>Medical school L</td>
<td>32</td>
<td>16.3</td>
</tr>
<tr>
<td>Medical school M</td>
<td>26</td>
<td>13.3</td>
</tr>
<tr>
<td>Medical school N</td>
<td>7</td>
<td>3.6</td>
</tr>
<tr>
<td>Medical school O</td>
<td>6</td>
<td>3.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>196</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Despite a lower number of trainees in 2012 and 2013, the number of Palliative Medicine trainees gradually improved throughout the 2008-2016 period, with more than twice the number of trainees in 2016 (Figure 6).

Figure 6. Number of Palliative Medicine trainees between 2008 and 2016 (by year)
4.2.2 Canadian medical schools offering added competency training in palliative care

In 2017, 13 Canadian medical schools (76%) were offering the opportunity to complete the Added Competency Training in Palliative Care (Figure 7). In addition, a 14th medical school will offer it in 2018.

![Figure 7. Percentage of Canadian medical schools offering added competency training in palliative care](image)

4.2.3 Residency training programs including mandatory or optional clinical rotations in palliative care

The majority of Canadian medical schools include palliative care rotations in some specialties. The specialties were palliative care is most often considered mandatory are: anesthesiology, care of the elderly, family medicine, medical oncology, neurology, psychiatry and radiation oncology.

4.2.4 Proportion of postgraduate trainees completing clinical rotations in palliative care during their residency, national variability and changes over time

Analysis was based on data obtained from responding Canadian medical schools who provided numbers for one year or more of the 2008-2017 period (n=13). Included in the results are 41,292 of the 101,216 residents (68.9%) from six specialties: anesthesiology (12 schools), family medicine (13 schools), geriatric medicine (11 schools), internal medicine (13 schools), neurology (9 schools) and psychiatry (11 schools) (Table 2).

Table 2. Number of residents from six specialties among the responding Canadian medical schools (n=13) compared to all Canadian medical schools (n=17) between 2008 and 2017

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Number of residents in responding medical schools (n=13)</th>
<th>Number of residents in all medical schools (n=17)</th>
<th>Residents included according to the data obtained (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthesiology</td>
<td>4,688</td>
<td>6,872</td>
<td>68.2</td>
</tr>
<tr>
<td>Family Medicine</td>
<td>18,970</td>
<td>27,126</td>
<td>69.9</td>
</tr>
<tr>
<td>Geriatric Medicine</td>
<td>273</td>
<td>299</td>
<td>91.3</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>9,906</td>
<td>14,387</td>
<td>68.9</td>
</tr>
<tr>
<td>Neurology</td>
<td>1,634</td>
<td>2,652</td>
<td>61.6</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>5,821</td>
<td>8,588</td>
<td>67.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>41,292</strong></td>
<td><strong>59,924</strong></td>
<td><strong>68.9</strong></td>
</tr>
</tbody>
</table>
According to available data from responding medical schools (n=13), the average proportion of palliative care clinical rotations (APPR) completed by Family Medicine residents was 53.6% between 2008 and 2017 (Table 3). The APPR was the highest for Medical school L (102.2%), Medical school K (88.5%) and Medical school J (88.3%), whereas Medical school A (14.1%) and B (30.9%) had the lowest APPR for the 10-year period.

Table 3. Average proportion of palliative care clinical rotations (APPR) among residents in Family Medicine according to available data from the 13 responding Canadian medical schools (%)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical school A</td>
<td>10.6</td>
<td>3.8</td>
<td>9.5</td>
<td>4.1</td>
<td>11.6</td>
<td>11.7</td>
<td>27.1</td>
<td>25.9</td>
<td>18.5</td>
<td>12.3</td>
<td>14.1</td>
</tr>
<tr>
<td>Medical school B</td>
<td>37.0</td>
<td>29.2</td>
<td>40.4</td>
<td>33.0</td>
<td>27.5</td>
<td>36.2</td>
<td>30.1</td>
<td>21.1</td>
<td>32.0</td>
<td>26.2</td>
<td>30.9</td>
</tr>
<tr>
<td>Medical school C</td>
<td>21.7</td>
<td>27.0</td>
<td>44.3</td>
<td>38.8</td>
<td>50.8</td>
<td>21.7</td>
<td>23.8</td>
<td>23.3</td>
<td>37.6</td>
<td>26.0</td>
<td>31.3</td>
</tr>
<tr>
<td>Medical school D</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>35.6</td>
<td>31.7</td>
<td>27.9</td>
<td>46.9</td>
<td>34.4</td>
<td>51.7</td>
<td>34.7</td>
<td>37.7</td>
</tr>
<tr>
<td>Medical school E</td>
<td>*</td>
<td>40.7</td>
<td>26.0</td>
<td>20.2</td>
<td>33.8</td>
<td>30.0</td>
<td>43.8</td>
<td>51.3</td>
<td>52.4</td>
<td>45.5</td>
<td>38.0</td>
</tr>
<tr>
<td>Medical school F</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>36.8</td>
<td>38.1</td>
<td>44.8</td>
<td>37.1</td>
<td>44.8</td>
<td>44.5</td>
</tr>
<tr>
<td>Medical school G</td>
<td>30.2</td>
<td>22.2</td>
<td>60.8</td>
<td>45.5</td>
<td>45.8</td>
<td>54.8</td>
<td>40.8</td>
<td>45.0</td>
<td>47.8</td>
<td>44.8</td>
<td>47.5</td>
</tr>
<tr>
<td>Medical school H</td>
<td>*</td>
<td>0.0</td>
<td>0.0</td>
<td>34.7</td>
<td>33.3</td>
<td>37.5</td>
<td>64.3</td>
<td>72.0</td>
<td>77.6</td>
<td>68.6</td>
<td>60.5</td>
</tr>
<tr>
<td>Medical school I</td>
<td>48.7</td>
<td>43.3</td>
<td>42.9</td>
<td>66.7</td>
<td>68.2</td>
<td>72.3</td>
<td>63.8</td>
<td>62.2</td>
<td>59.9</td>
<td>68.1</td>
<td>60.5</td>
</tr>
<tr>
<td>Medical school J</td>
<td>85.1</td>
<td>93.5</td>
<td>86.7</td>
<td>93.5</td>
<td>104.5</td>
<td>101.9</td>
<td>81.7</td>
<td>88.2</td>
<td>81.0</td>
<td>76.3</td>
<td>88.3</td>
</tr>
<tr>
<td>Medical school K</td>
<td>86.6</td>
<td>86.1</td>
<td>77.1</td>
<td>87.0</td>
<td>82.2</td>
<td>89.2</td>
<td>93.4</td>
<td>89.4</td>
<td>81.6</td>
<td>109.9</td>
<td>88.5</td>
</tr>
<tr>
<td>Medical school L</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>102.2</td>
</tr>
<tr>
<td>Medical school M</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>73.4</td>
<td>73.4</td>
</tr>
</tbody>
</table>

Mean 45.7 38.4 43.1 45.9 48.9 48.3 50.2 50.1 53.2 51.9 53.6

* Data not provided from the medical school.

However, despite a trend towards an increasing APPR, few medical schools have shown an important increase in APPR over the study period (Figure 8).
Figure 8. Average proportion of palliative care clinical rotations (APPR) in Family Medicine Postgraduate Training according to available data* from responding Canadian medical schools (by year)

Data in Table 4 suggest that fewer than half of residents in the selected specialties (i.e. anesthesiology, family medicine, geriatric medicine, internal medicine, neurology and psychiatry) completed a palliative care clinical rotation during their training. During the 10-year period, the mean APPR of residents trained in palliative care was at its lowest in 2009 (26.5%) and at its highest in 2015 (61.8%). Geriatric Medicine (65.6%) and Family Medicine (53.6%) had the highest mean APPR for the 2008-2017 period, followed by Psychiatry (3.4%). According to the data available, we estimate that one out of three residents in Internal Medicine and Neurology completed a rotation in palliative care during their residency between 2008 and 2017.

* Medical schools L and M are excluded from this figure as they provided combined data for the 2008-2017 period or data for one year only.
Table 4. Average proportion of palliative care clinical rotations (APPR) among residents in selected specialties according to available data* from responding Canadian medical schools (%)

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
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* Medical schools L and M provided combined data for the 2008-2017 period or data for one year only.

Despite a trend towards an increasing APPR over the years for most specialties, none has maintained constant improvement for the 10-year period (Figure 9).

Figure 9. Average proportion of palliative care clinical rotations (APPR) among selected residencies according to available data* from responding Canadian medical schools (by year)

* Medical schools L and M are excluded from this figure as they provided combined data for the 2008-2017 period or data for one year only.
5. Conclusion

In conclusion, results of this study reveal that access to undergraduate and postgraduate palliative care clinical rotations is inconsistent. At the undergraduate level, 15 out of 17 Canadian medical schools are offering palliative care clinical rotations. Among those, only two medical schools are offering palliative care clinical rotations on a mandatory basis. Consequently, between 2008 and 2016, the vast majority of Canadian medical students graduated without the benefit of being trained in palliative care.

At the postgraduate level, 196 trainees have graduated from a Palliative Medicine training program in Canadian medical schools. In 2017, 3 out of 4 Canadian medical schools were offering the opportunity to complete the Added competency training in Palliative care. Over the last 10 years, almost half residents completed a palliative care clinical rotation during selected specialties (i.e. anesthesiology, family medicine, geriatric medicine, internal medicine, neurology and psychiatry). However, despite a trend towards an increase of the average proportion of palliative care clinical rotations over the years for most specialties, none has maintained constant improvement for the 10-year period.

The delivery of palliative care is a shared responsibility among all health professions and within all fields of medicine. To provide quality palliative care, all health care professionals, including physicians and specialists, should have the opportunity to gain the appropriate training.
References


