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# Optimal Length of Family Medicine Residency Training: An Outcomes of Training Project evidence summary

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## Background

In 2018 the College of Family Physicians of Canada (CFPC) published the *Family Medicine Professional Profile* (FMPP),<sup>1</sup> a position statement for the discipline of family medicine that describes the collective contributions, capabilities, and commitments of family physicians to the people of Canada. The FMPP built on earlier generations of improvement-oriented work, including the CFPC's Triple C Competency-Based Curriculum,<sup>2</sup> which was introduced nearly a decade earlier. The FMPP clarified the definition of comprehensiveness and serves as a framework for assessing the current state of training and, where necessary, for improving the preparation of residents for practice and future learning.

As part of the Outcomes of Training Project (OTP),<sup>3</sup> the Residency Training Profile<sup>4</sup> was developed using the FMPP to describe the work for which graduates are being prepared. In defining what we are aiming to achieve with family medicine residency training, the Residency Training Profile framed how the OTP would examine the current state of family medicine residency training, with time or length of training as one of the primary resource considerations in a competency-based medical education paradigm.

An international review comparing the length, scope, and design of family medicine training<sup>5</sup> revealed that Canada has the shortest length of training by one to two years and, along with the United States, Canada has the shortest duration of pre-residency medical education despite having a similar, and in some cases greater, scope of training. Drivers for extending the length of training were identified throughout OTP consultations, including the transition of secondary care into the community; an aging population with higher rates of complex and chronic conditions; higher cancer survival rates; larger roles for population health and prevention; expanded roles in care coordination, service design and improvement, research, and education; reduction in trainee duty hours; and struggles to cover the existing family medicine curriculum in two years.<sup>3</sup> There has been debate in Canada and in other countries about the optimal length of family medicine residency training, and this conversation has been raised anew given these considerations.

## Objective

The purpose of this review was to summarize the literature in Canada, the United Kingdom, and the United States pertaining to the optimal length of family medicine training.

## Methods

A rapid review of the literature was conducted to locate original research, reports, and commentaries from Canada, the United Kingdom, and the United States about the optimal length of family medicine residency training. The United Kingdom and the United States were included in the review because they are known to have begun studying and/or piloting extended training programs for generalist physicians.

### Search strategy

For the literature review, MEDLINE and Global Health databases were reviewed using the following broad search terms: general practitioners/physicians, family physicians, primary care physician, length (training/education/program/residency), and program evaluation. The search was limited to articles published in 2000 or later. The Boolean operators **and** and **or** were used to ensure a focused and comprehensive list. The search yielded 1,229 results. Eighteen publications were included in the review and were selected based on their relevance to the length of training programs as identified in the published abstract. Some publications did not appear in the database search results but were identified through reference mining.

## Findings

Most sources (12 of 18) identified were from the United States, and the primary research cited is nearly entirely from the American context. The review did not yield any Canadian primary research articles. Several Canadian commentaries on the topic were identified and their central arguments are summarized in the rationale sections below. The research findings presented in the evidence sections below are from the United States and the United Kingdom.

The **rationale for extending** the program length includes:

- The increased complexity of medicine and of patients' conditions, an aging population, expanded curriculum content, demand from applicants for greater flexibility, and the need for more generalist family physicians<sup>6,7</sup>
- Roughly 25 per cent of family medicine residents in Canada in 2008 pursued an additional year of training<sup>8</sup>
- The need for family physicians to have greater expertise in palliative care<sup>8</sup>
- The need for a renewed focus on relationships with patients; continuing professional development is not sufficient for addressing gaps in training<sup>9</sup>
- Expanded roles for general practitioners in care coordination; service design and improvement; research; and education<sup>10</sup>

The **rationale for maintaining** the current program length includes:

- The competency-based curriculum of the CFPC allows most residents to complete the program in 24 months; those who require longer can extend the length of their training as needed<sup>11</sup>
- A universal extension of residency training would have substantial administrative and resource implications, including for physician availability for patient care<sup>11</sup>
- Education and development are expected to continue after residency<sup>11</sup>
- It remains unclear how extending the length of training would affect the recruitment of women, individuals from under-represented communities (such as racialized communities), and applicants with substantial educational debt<sup>12</sup>
- The extension of training length could cause a shortage of family physicians in the first year of implementation by creating a gap year in which few new family doctors would achieve certification and enter practice<sup>13</sup>

- Some gaps in confidence of new family physicians could be addressed through other initiatives<sup>13</sup>
- Extending family medicine residency training may decrease trainees' interest in the discipline<sup>14</sup>

**Evidence supporting** the extension of family medicine/general practice training includes:

- Excessive content to learn in the current length of training; the need for more exposure to procedures and training in specific clinical areas; and the need to meet regulations that include limits to resident work hours<sup>15</sup>
- Residents' rejection of the notion of shortening a three-year program to two years<sup>15</sup>
- Support among prospective residents for a four-year program with desired additional training in specific areas<sup>16</sup>
- No significant effect on prospective residents' choice of family medicine noted in extending residency to a four-year program<sup>16</sup>
- Additional fourth-year options for post-residency fellowships increased the number and quality of applicants in one three-year program<sup>17</sup>
- More interest in a fourth year of training among residents intending to practise as hospitalists, outside ambulatory care settings, and in obstetrical deliveries<sup>18</sup>
- Significantly stronger performances by residents in four-year pilot programs in yearly in-training exams compared with their three-year counterparts<sup>19</sup>
- The desire for more flexibility and for learning additional non-clinical skills predominant among residents surveyed about pursuing a four-year program<sup>20</sup>
- Slightly higher scope-of-practice scores (indicating broader scopes) among graduates exposed to four-year pilot programs compared with those who were not exposed<sup>21</sup>
- A significantly greater likelihood among graduates exposed to four-year pilot programs to report the following clinical activities as part of their practices:

adult hospital care, adult ICU care, C-sections, and newborn resuscitation<sup>21</sup>

- A greater likelihood among graduates exposed to four-year pilot programs to report higher rates of performing routine office surgeries, in-patient procedures, obstetric procedures, and pediatric procedures<sup>21</sup>
- The identification of gaps in training by newly qualified general practitioners, including practice management, leadership, and training opportunities outside general practice settings<sup>22</sup>

**Evidence questioning** extending family medicine/general practice program length includes:

- The role of continuing professional development as a source of learning throughout their careers, as well as concerns about fatigue and overwork, the additional time commitment, financial constraints, and the perceived low quality of existing three-year training that family medicine graduates cited in a survey as reasons not to add a fourth year<sup>9</sup>
- The minimal likelihood of pursuing a fourth year if it were available, which was reported by slightly more than half of residents surveyed at the end of their three-year programs<sup>18,23</sup>
- An increase in the proportion of residents in three-year programs surveyed who did not believe a fourth year was necessary<sup>20</sup>
- The percentage of residents in four-year pilot programs surveyed who believed a fourth year was necessary fluctuated between 25 per cent and 35 per cent over the four years studied<sup>20</sup>

## Limitations

Strong evidence is generally lacking on the ideal length of family medicine residency training, hence the reliance on original research articles from the United States. Many of the studies have small sample sizes, are region-specific, or sample residency programs that are more competitive, potentially skewing performance outcomes and results. We opted to include information published in commentaries and reports to highlight the arguments and opinions surrounding this debate.

## Conclusions

Research data on the optimal length of training are mixed in the United States, somewhat nascent in the United Kingdom, and lacking in the Canadian context. Given that the United States currently has a three-year residency program, while Canada's family medicine training is two years, the transferability of research may be somewhat limited across these jurisdictions. Nevertheless, there are similar pressures in both contexts for and against extending program length. The rationale for extending the length of training is based on an expanding curriculum, the need for more generalist practitioners, and the expanding role of family physicians. The rationale for maintaining the current program length revolves around the resource implications of training extension and the capacity for innovation and flexibility in the current model.

## Further information

To read the full report—*Preparing Our Future Family Physicians: An educational prescription for strengthening health care in changing times*—and related evidence and scholarship, please visit <https://www.cfpc.ca/futurefp>.

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