

# Appendix D: The Merits and Challenges of Three-Year versus Four-Year MD Programs

Three-Year MD Programs	
Merits	Challenges
<p><b>Student Outcomes</b> The literature demonstrates that students' and graduates' performance at three-year programs is similar to that of their four-year MD peers.<sup>1</sup> One study also found that students at three-year programs were more likely to indicate their desire to care for underserved populations and practice family medicine than students from four-year programs.<sup>2</sup></p> <p><b>Student Debt Load</b> Three-year programs can reduce lifetime student debt burden and provide an opportunity for an additional year of productive clinical practice.<sup>3</sup> One study specifically found that students from three-year programs had less debt than those at four-year programs.<sup>4</sup></p> <p><b>Cost-Effectiveness</b> Three-year programs may be slightly more cost effective than 4-year programs to deliver. Based</p>	<p><b>Reduced Time for Rest, Extra-Curriculars, and Holidays</b> All four-year programs in Canada give students a four-month break in the summer following completion of their first and second year.<sup>9</sup> In three-year programs, there is less opportunity to partake in paid work and offset tuition costs as students do not have these defined breaks.</p> <p><b>Less Time for Career Development and Specialty Exploration.</b> Three-year programs limit time for reflection and learners are required to apply and interview for residency positions while completing their clerkship.<sup>10</sup> From 1970-80, approximately 25% of learners enrolled in three-year medical degrees in the United States voluntarily extended their education by one to two years. The additional year was cited as time for students to pursue additional electives and rest after studying for 34 out of 36 program months.<sup>11</sup></p>

<sup>1</sup> Cangiarella J, Fancher T, Jones B, et al. Three-year MD programs: perspectives from the consortium of accelerated medical pathway programs (CAMPP). *Acad Med.* 2017;92(4):483-90. doi: 10.1097/ACM.0000000000001465  
Cangiarella J, Leong S, Cole CL, et al. Accelerated MD program graduates: Views on their education, wellness, residency readiness and debt from the AAMC GQ. AAMC 2019 Poster Presentation.

<sup>2</sup> Ibid.

<sup>3</sup> Raymond Sr JR, Kerschner JE, Hueston WJ, Maurana CA. The merits and challenges of three-year medical school curricula: time for an evidence-based discussion. *Acad Med.* 2015;90(10):1318. doi: 10.1097/ACM.0000000000000862

<sup>4</sup> Cangiarella J, Leong S, Cole CL, et al. Accelerated MD program graduates: Views on their education, wellness, residency readiness and debt from the AAMC GQ. AAMC 2019 Poster Presentation.

<sup>9</sup> Ibid.

<sup>10</sup> Cangiarella J, Cohen E, Rivera R, Gillespie C, Abramson S. Evolution of an accelerated 3-year pathway to the MD degree: the experience of New York University Grossman School of Medicine. *Acad Med.* 2020;95(4):534-9. doi: 10.1097/ACM.0000000000003013

<sup>11</sup> Goldfarb S, Morrison G. The 3-year medical school—change or shortchange. *N Engl J Med.* 2013;369(12):1087-9. doi: 10.1056/NEJMp1306457

<p>on a 2010 analysis, estimated savings in costs for delivery of a 3 year program over the duration of the program would be between \$14,000 and \$31,307 per student.<sup>5</sup></p> <p><b>Student Experience</b> Preliminary research from accelerated programs in the United States suggests learners in three-year programs do not experience burnout at higher rates than learners in four-year programs.<sup>6</sup> Another US study found that three-year students were as satisfied with the quality of their education and felt as prepared for residency as four-year students. They also reported a more positive learning climate as measured by the student-faculty interaction and emotional climate scales.<sup>7</sup></p> <p><b>Physician Shortages</b> A three-year program allows students to graduate and enter the work-force more quickly, helping communities address physician shortages.<sup>8</sup></p>	<p><b>Resource Intensity</b> Based on anecdotal evidence and recommendations from the literature, it appears that three-year programs may be more resource intensive in regards to student support requirements. Due to the higher demands and accelerated timeline of a three-year program, comprehensive support systems are essential to their success. The literature also emphasizes the need for robust support systems and faculty development.<sup>12</sup></p> <p><b>Compressed Content</b> A three-year program may compress the content that can be delivered in the curriculum. It may also result in subjects not explicitly tested on during licensing to be given less emphasis, such as population health.<sup>13</sup></p>
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Four-Year MD Programs	
Merits	Challenges
<p><b>Student Outcomes</b> The literature demonstrates that student outcomes are similar across both three and four-year programs. One study found that completion rates were slightly higher for students enrolled in</p>	<p><b>Cost-Effectiveness</b> Four-year programs are more expensive for universities to administer, costing \$14,000 to \$31,000 more over the duration of the program than three-year programs.<sup>18</sup></p>

<sup>5</sup> Page D, Baranchuk A. Should Canadian medical schools implement a widespread 3 year medical curriculum?. *Can Med Educ J*. 2010;1(1):e39-45. doi: <https://doi.org/10.36834/cmej.36523>

<sup>6</sup> Weiner, S. Med school in 3 years: Is this the future of medical education? American Association of Medical Colleges. Published March 29, 2019. Accessed December 10, 2021. <https://www.aamc.org/news-insights/med-school-3-years-future-medical-education>

<sup>7</sup> Cangiarella J, Leong S, Cole CL, et al. Accelerated MD program graduates: Views on their education, wellness, residency readiness and debt from the AAMC GQ. AAMC 2019 Poster Presentation.

<sup>8</sup> Schwartz CC, Ajjarapu AS, Stamy CD, Schwinn DA. Comprehensive history of 3-year and accelerated US medical school programs: a century in review. *Medical Education Online*. 2018;23(1):1530557. doi: 10.1080/10872981.2018.1530557

<sup>12</sup> Raymond Sr JR, Kerschner JE, Hueston WJ, Maurana CA. The merits and challenges of three-year medical school curricula: time for an evidence-based discussion. *Acad Med*. 2015;90(10):1318. doi: 10.1097/ACM.0000000000000862

<sup>13</sup> Ibid.

Goldfarb S, Morrison G. The 3-year medical school—change or shortchange. *N Engl J Med*. 2013;369(12):1087-9. doi: 10.1056/NEJMp1306457

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<sup>18</sup> Ibid.

four-year programs (83.3% vs 74.4%).<sup>14</sup>

### **More Holistic Approach**

The four month break in four-year programs allows for students to earn income, gain exposure to research or areas of interest in medicine, and strengthen personal networks.<sup>15</sup> Having four years as opposed to three also allows for content to be spread throughout the program and more holistic content to be included, such as social sciences and health systems sciences.<sup>16</sup>

### **More Time for Electives and Specialty Selection**

The fourth year of medical education is a time for students to synthesize their experiences from their clerkship year and apply for residency positions. This allows for more reflection and for students to pursue electives or other exploratory experiences to assist with specialty selection.<sup>17</sup> Students are also able to gain more competitiveness in applying to residency positions through these additional experiences.

### **Student-Debt Load**

The literature indicates that students who have completed four-year programs have more student-debt than their three-year counterparts.<sup>19</sup> They are also delayed in paying off their debt due to the additional year they are enrolled in medical school before being able to earn an income as a physician.

### **Slower Introduction of Physicians Into Communities**

Four-year programs are slower at getting students graduated and into communities to serve physician shortages.<sup>20</sup>

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<sup>14</sup> Cangiarella J, Fancher T, Jones B, et al. Three-year MD programs: perspectives from the consortium of accelerated medical pathway programs (CAMPP). *Acad Med*. 2017;92(4):483-90. doi: 10.1097/ACM.0000000000001465

Cangiarella J, Leong S, Cole CL, et al. Accelerated MD program graduates: Views on their education, wellness, residency readiness and debt from the AAMC GQ. AAMC 2019 Poster Presentation.

<sup>15</sup> Page D, Baranchuk A. Should Canadian medical schools implement a widespread 3 year medical curriculum?. *Can Med Educ J*. 2010;1(1):e39-45. doi: <https://doi.org/10.36834/cmej.36523>

<sup>16</sup> Ibid.

<sup>17</sup> Cangiarella J, Cohen E, Rivera R, Gillespie C, Abramson S. Evolution of an accelerated 3-year pathway to the MD degree: the experience of New York University Grossman School of Medicine. *Acad Med*. 2020;95(4):534-9. doi: 10.1097/ACM.0000000000003013

<sup>19</sup> Cangiarella J, Leong S, Cole CL, et al. Accelerated MD program graduates: Views on their education, wellness, residency readiness and debt from the AAMC GQ. AAMC 2019 Poster Presentation.

<sup>20</sup> Schwartz CC, Ajarapu AS, Stamy CD, Schwinn DA. Comprehensive history of 3-year and accelerated US medical school programs: a century in review. *Medical Education Online*. 2018;23(1):1530557. doi: 10.1080/10872981.2018.1530557