COMMENTARY

Death, Taxes, and Tuition Increases

T. Joseph Mattingly II, PharmD, MBA, PhD

a University of Utah College of Pharmacy, Salt Lake City, Utah
b Editorial Board Member, American Journal of Pharmaceutical Education, Arlington, Virginia

Submitted February 22, 2022; accepted April 8, 2022; published February 2023.

INTRODUCTION

Our new Constitution is now established and has an appearance that promises permanency; but in this world nothing can be said to be certain, except death and taxes. – Benjamin Franklin, 1789.

There are few certainties in higher education. The impact of COVID-19 pandemic reminded us of this fact as many of our institutions ceased regular operations to adjust for social distancing requirements and to protect our students, faculty, and staff. The US economy essentially froze for a period in 2020, with nearly 40 million Americans filing for unemployment and crippling uncertainty in many sectors, particularly in higher education. A global pandemic forced academic leaders to rethink education delivery, and pharmacy schools responded to meet the changing needs of the health system.

The growth in pharmacy education (increased number of schools and increased enrollment for existing schools) in the United States over the past few decades has been previously documented. Additionally, costs to pharmacy students have increased through consistent tuition and fee inflation. In financial accounting terms, total revenue is a simple function of units sold and price per unit. Universities, both for-profit and not-for-profit, have greatly increased their total revenue generated from pharmacy students (along with other degree programs in high demand) over an extended period with a high level of predictability. Facing a global pandemic that put many Americans out of work and created significant economic uncertainty for our students, would schools of pharmacy respond by putting their revenue needs on hold? This commentary aims to answer that question by assessing tuition and fee changes across US schools and colleges of pharmacy over the past three fiscal years and provides a call to action for pharmacy education leaders.

Corresponding Author: Joey Mattingly, University of Utah College of Pharmacy, 30 South 2000 East, Salt Lake City, Utah, 84098. Tel: 801-585-0094. Email: joey.mattingly@utah.edu

DISCUSSION

Pharmacy School Tuition From 2019 to 2022

Pharmacy school tuition data for three consecutive fiscal years (2019-2020, 2020-2021, and 2021-2022), published by the American Association of Colleges of Pharmacy (AACP) Office of Institutional Research and Effectiveness, was used to extract pharmacy school characteristics and tuition/fee information. This period was selected to observe cost changes before and during the COVID-19 pandemic, as 2019-2020 budgets were determined prior to any knowledge of the significant economic impact that would ultimately begin in the US in March 2020.

Unadjusted costs were used to represent the actual dollars reported to AACP representing actual amounts charged to students. Costs were defined as the sum of tuition and mandatory fees reported for each year, representing total annual education charges reported by each school. Cost changes were simply the differences between school years included in the sample, reported separately for in-state and out-of-state students. Cost changes were analyzed both as continuous and binary variables. As a continuous variable, individual-level school cost change was assessed from fiscal year 2019-2020 to fiscal year 2020-2021, fiscal year 2020-2021 to fiscal year 2021-2022, and fiscal year 2019-2020 to fiscal year 2021-2022. As a binary variable, the school cost change was considered an increase (cost change > 0) or not (cost change ≤ 0). Cost changes were assessed for the full sample and then evaluated by school type (public vs private). For comparisons between public and private schools, student t test and chi-square test of independence were used (significance: alpha = 0.05).

Of the 138 schools and colleges of pharmacy that reported tuition and fee data to AACP, 68 (49%) public and 70 (51%) private schools were included (Table 1). Most schools were defined as traditional (88%) and used semester-based scheduling (86%). Median in-state charges for all schools were $34,559, $34,695, and $35,185 for 2019-2020, 2020-2021, and 2021-2022, respectively. Median out-of-state charges for all schools were $41,347, $41,534, and $41,640 for 2019-2020, 2020-2021, and 2021-2022, respectively.
Between the 2019-2020 and 2020-2021 school years, median in-state costs increased by $454 (1.3%), with 95 (69%) schools reporting an increase in costs. During that same period, median out-of-state costs increased by $641 (1.5%), with 94 (68%) schools reporting an increase. From 2020-2021 to 2021-2022, median in-state costs increased by $503 (1.4%), with 102 (74%) schools reporting an increase. During that same period, median out-of-state costs increased by $622 (1.5%), with 100 (72%) schools reporting an increase. Over both fiscal years from 2019-2020 to 2021-2022, median in-state costs increased by $1,117, with 117 (85%) schools reporting an increase, while median out-of-state costs increased by $1,367, with 112 (81%) schools reporting an increase (Table 1).

Between 2019-2020 and 2020-2021 academic years, costs increases were similar for public and private schools whether evaluating costs as continuous (p = .76 for in-state, p = .22 for out-of-state) or binary variables (p = .16 for in-state, p = .11 for out-of-state). From 2020-2021 to 2021-2022, private school in-state cost increases were significantly higher (p = .009) with more private schools experiencing cost increases (p = .015). During that same period, private school out-of-state cost increases were not statistically different than public school increases (p = .06), but more private schools increased out-of-state costs (p = .006). Over both fiscal years, private school cost increases were higher for both in-state (p = .024) and out-of-state (p = .024). However, the relationship between school type and “any increase” was not significant over the period (Table 2).

### Interpreting Tuition Increases During Covid-19

Pharmacy school cost changes over the COVID-19 pandemic can be viewed positively or negatively, depending on one’s perspective. From the student perspective, actual dollar increases show that a large majority of schools raised their tuition and fees. For school administrators, one could argue that these price increases are much slower than those experienced across all educational institutions in recent years. From a larger societal perspective, Consumer Price Index (CPI) Inflation from 2019-2020 and 2020-2021 was 1.0% and 5%, respectively. This means that pharmacy school enrollment costs to students, while increasing, were comparable to national price increases for common items such as food, electricity, and shelter. However, the Bureau of Labor Statistics (BLS) also disaggregates college tuition and fees for all urban consumers, and the estimated inflation using this index for 2019-2020 and 2020-2021 was 1.0% and -0.05% respectively. In other words, while college tuition and fees generally fell during the 2020-2021 school year, pharmacy school increases remained.

Considering the slowdown in pharmacy school applications prior to the pandemic and entry into one of the most significant public health and economically challenging periods in our lifetime, one could argue any unadjusted cost increase passed on to our students may be problematic. What will it take to bend the pharmacy education cost curve and bring real tuition and fees down? Throughout the pandemic, some schools braced for economic hardships through the unknown of a worldwide pandemic and cut operating costs. In some cases, schools may have experienced some cost savings with no or limited in-person instruction. However, the full impact of the pandemic on school operating costs needs further evaluation. Even with educators realizing broader economic challenges resulting from COVID-19, over 80% of schools consciously approved tuition and fee increases, with no real difference between public and private schools.

---

**Table 1. School Characteristics, Costs, and Cost Changes at US Schools and Colleges of Pharmacy (N=138)**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>School type, No. (%)</th>
<th>Program structure, No. (%)</th>
<th>Academic term, No. (%)</th>
<th>Education cost and cost changes in US dollars ($)</th>
<th>Median (range)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public 68 (49.3)</td>
<td>Traditional 121 (87.7)</td>
<td>Semester 118 (85.5)</td>
<td>Total cost (tuition + mandatory fees)</td>
<td>2019-2020 in-state 34,559 (5,512-81,094)</td>
</tr>
<tr>
<td></td>
<td>Private 70 (50.7)</td>
<td>Accelerated 17 (12.3)</td>
<td>Other 20 (14.5)</td>
<td>2019-2020 out-of-statea 1,367 (-15,410-17,277)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2020-2021 in-state 34,695 (5,464-81,810)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2020-2021 out-of-state 41,534 (19,764-81,810)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2021-2022 in-state 35,185 (5,561-84,060)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2021-2022 out-of-state 41,640 (20,288-84,060)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cost changes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2019/20 to 2020/21 in-state 454 (-13,824-4,735)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2019/20 to 2020/21 out-of-state 641 (-15,486-5,015)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2020/21 to 2021/22 in-state 503 (-2,869-17,277)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2020/21 to 2021/22 out-of-state 622 (-5,629-17,277)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2019/20 to 2021/22 in-statea 1,117 (-8,824-17,277)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2019/20 to 2021/22 out-of-statea 1,367 (-15,410-17,277)</td>
<td></td>
</tr>
</tbody>
</table>

* Both states.
Pharmacy deans and administrators must consider several factors when developing the annual budget to achieve their respective institutions' strategic objectives. Schools employ faculty and staff and are charged with delivering instruction at a high level to ensure all graduates are prepared for long careers. Throughout the pandemic, schools were forced to expend resources to adapt to the changing in-person, virtual, or mixed instruction environments. Additionally, market competition changes for talent may have required maintaining or increasing salaries for faculty and staff. For example, public health needs during the pandemic required more clinicians to support testing and vaccination programs, making it more difficult for some schools to retain clinical faculty who recognized higher market demand for their skills.

Public universities typically rely on state and federal funding for a proportion of operations. In cases where state appropriations to schools of pharmacies were cut, the tuition and fee increases may have merely maintained revenues without significant faculty or staff cuts. While other factors are certainly important in a summative judgment around a tuition increase, tuition and fee costs are directly passed to our students and was the focus of this commentary.

CONCLUSION

Over the course of the COVID-19 pandemic, median in-state costs for pharmacy students increased by $1,117 with 117 (85%) schools reporting an increase while median out-of-state costs increased by $1,367 with 112 (81%) schools reporting an increase. There are no laws mandating pharmacy school tuition increases every year. So, why haven’t pharmacy education leaders been more proactive in lowering prices and making school more affordable for our students? What obstacles do pharmacy school deans face
when advocating against tuition increases that may be determined at a university level? Are pharmacy school cost changes similar to comparable graduate programs? Some may consider inflation-level increases reasonable. However, settling for 1%-5% annual increases across the board may miss a bigger picture. We need the Association, specifically our Council of Deans, to actively explore ways to reduce costs to students and lower the debt burden placed on our profession’s newest practitioners. If we can’t get an Association-wide push to lower costs, I would settle for just one dean to step up to this challenge. Someone who can be a leader to demonstrate how a school can lower its revenue without lowering its quality or effectiveness. Tuition and fee increases should not be a certainty in pharmacy education.

REFERENCES