

# A Comparison of the United States and Austrian Healthcare Needs and Systems

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## Abstract

Austria and the United States have very different healthcare systems with Austria following a social insurance model and the United States following an out of pocket model however; gross domestic product on healthcare expenditures. There is a current gap in literature on how the United States and Austrian healthcare systems comparatively impact patient outcomes, especially when considering the mediating effects of societal norms such as exercise and mental self-care habits. The information presented could benefit the United States healthcare system if they adopted Austria's model, which expands access, and the Austrian healthcare system regulators could look to American standards of communication and care coordination to improve their healthcare system overall.

## Keywords

health care systems, cross country comparison, United States, Austria, general medicine

## Introduction

Austria and the United States have very different healthcare systems, with Austria following a “social insurance model” and the United States following an “out-of-pocket.” model.<sup>1,2</sup> The social insurance model is often characterized as a fund which both employers and employees pay into. Under this model, the government often retains a high degree of regulatory control and grants the government the ability to control costs like in government-sponsored single-payer models.<sup>1,3</sup> Meanwhile, the out-of-pocket model implies that individuals pay for medical care provided through private sector systems with little to no government cost control.<sup>2</sup> In assessing the overall health care system, including cost and quality of care, Ozcan and Khushalani ranked Austria 4th among Organization for Economic Co-Operation and Development (OCED) countries, the United States 12th.

The United States and Austria are similar in that they spend a large portion of their gross domestic product on healthcare expenditures. However, both the United States and Austria have unmet healthcare needs.<sup>4</sup> These unmet needs are demonstrated by high rates of obesity in the United States and high rates of Tobacco use in Austria.<sup>4</sup> These needs are particularly evident in the United States. Despite spending a larger portion of GDP on health than any other country globally, life expectancy rates are comparatively low.<sup>4</sup> People living in the United States have a life expectancy of 78.8 years.<sup>5,6</sup> Austria's life expectancy is high at 82 years, both compared to the United States and other EU countries.<sup>5,6</sup> Though Austria's life expectancy is higher; however, the

population suffers disproportionately from tobacco-related health concerns. Some studies suggest that Austrians experience worse outcomes related to certain types of cancer and cardiovascular disease survival.<sup>4</sup>

## Problem Statement

Austria and the United States have very different healthcare programs, with Austria experiencing more extensive healthcare coverage and the United States spending more per capita.<sup>4</sup> There is currently a gap in the literature on how the United States and Austrian healthcare systems comparatively impact patient outcomes, especially when considering the mediating effects of societal norms such as exercise and mental self-care habits.<sup>4</sup> For this study's purpose, societal norms are defined as the cultural practices related to health, socialization, diet, and exercise. A comparative approach was used in this study through the guidance of 3 key research questions.<sup>7</sup> The aim was to use existent literature and national statistics to illustrate similarities and differences between Austrian and United States healthcare systems.

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**Table 1.** Life Expectancy and Mortality for Austria from 1980 to 2016.<sup>8</sup>

	1980	1990	2000	2010	2016
Life expectancy at birth, total	72.7	75.8	78.3	80.5	81.6
Life expectancy at birth, men	69.0	72.2	75.1	77.7	79.1
Deaths per 1000 population, total	19.4	15.2	12.9	11.0	9.9
Deaths per total 1000 population, men	23.2	18.9	15.5	13.3	11.9
Deaths per 1 000 population, women	15.5	12.3	10.3	8.8	7.9

Sources. Statistics Austria, 2017q, Statistics Austria, 2018a.

Note. Age and sex standardized with European Standard Populations 2013.

## Research Questions

The following research questions related to the United States and Austrian healthcare systems will guide the present comparative analysis:

**RQ1.** What are the major similarities and differences in the United States and Austrian healthcare needs, driven by similar or differing societal norms?

**RQ2.** Comparatively, how does Austria and the United States address or fail to address their societal healthcare needs?

**RQ3.** What elements of Austria's and the United States' health care system could be beneficially implemented in the other country to improve healthcare outcomes?

## Societal Driven Healthcare Needs

### Austria

The Austrian healthcare system is characterized by publicly funded healthcare. All individuals in Austria are provided with healthcare to meet emergency and regular medical needs. Additionally, individuals visiting from other European Union countries are covered underneath the Austrian universal healthcare system.<sup>8</sup> Individuals are provided the opportunity to purchase additional healthcare if needed or offered by their employer.<sup>8</sup> Supplementary healthcare options are considered, comfort class care, which allows for additional services, doctor visits, and visiting hours dependent upon the supplementary plan.<sup>8</sup> The enrollment within the healthcare system is automatic and required. Enrollment may also be associated with the employment status of the individual.<sup>8</sup> Spouses and dependents, such as children, are automatically enrolled within the healthcare system. After enrollment, an e-card located on an electronic device is provided to the doctor at the time of the healthcare visit.<sup>8</sup>

### Out of Cost Payments

The healthcare system of Austria is organized around both private and state-owned systems.<sup>8</sup> Despite the providence of universal healthcare, some out of cost payments are required. Significant changes in the economic health of Austria during

2010 led to an increase in out-of-pocket payments.<sup>8</sup> However, Austria is ranked among the top countries for healthcare. According to the World Health Organization (WHO), Austria is ninth globally in the healthcare system and among the top 5 countries in terms of quality of living.<sup>8</sup> According to the Euro Health Consumer Index, the care provided in Austria is ranked 12th globally, which is in reduced part rating due to the lack of publicly available abortions.<sup>8</sup>

### Life Expectancy

Overall, the Austrian population enjoys above-average health and life expectancy.<sup>9</sup> According to Bergeron-Boucher, Canudas-Romo, Pascariu, and Lindahl-Jacobsen, the Austrian life expectancy is higher than average when compared to EU countries and substantially higher than the United States. Despite long lives and low mortality rates, the Austrian population experiences pockets of health care concerns, which are not immediately evident by an examination of life expectancy or overall population health. For example, Austrians die from cardiovascular disease and cancer at higher rates than would be expected when compared to EU countries with lower life expectancies and higher mortality rates.<sup>9</sup> This phenomenon may be attributable to societal concerns such as high tobacco and alcohol use.<sup>9</sup> However, Austrian healthcare systems have increased the life-expectancy among men and women since the early 1980s to 2016 (Table 1).<sup>8</sup>

### Major Healthcare Issues

Smoking and tobacco use remains a major health concern in Austria, despite declining tobacco users worldwide.<sup>10</sup> While many other countries have limited or banned smoking in public spaces in the early 2000s or sooner, Austrian bars commonly allowed smoking indoors, and restaurants allowed smoking in outdoor eating areas until 2015 (Table 2).<sup>8</sup>

Compounding the issues created by Austria's permissive smoking policies, the price of tobacco in Austria is some of the lowest in the European Union.<sup>10</sup> According to the 2013 Tobacco Control Scale, Austria ranked the lowest for control of tobacco of any European Union country.<sup>11</sup> Young adults, aged 18 to 28 years, were particularly likely to smoke with rates of 52% for men and 32% for women.<sup>11</sup>

**Table 2.** Austrian Healthcare Morbidity and Health Status Factors.<sup>8</sup>

	1980	1990	2000	2010	2014
Days of absence per employee, women	—	—	13.0	13.0	13.2
Days of absence per employee, men	—	—	14.9	12.8	12.3
Health determinants (life style)					
Smoking prevalence, females (% of adults)	13.4	17.5	18.8	19.4	22.2
Smoking prevalence, males (% of adults)	35.3	34.6	30.0	27.5	26.7
Girls smoking at least once a week (% of 15-year-old girls)	—	—	37.1	29.3	15.5
Boys smoking at least once a week (% of 15-year-old boys)	—	—	26.1	25.2	14.2
Girls first smoking aged 13 years or younger (% of 15-year old girls)	—	—	—	35.0	23.0
Boys first smoking aged 13 years or younger (% of 15-year old boys)	—	—	—	35.0	27.0
Total alcohol consumption (liters per capital aged 15+)	13.6	17.5	18.8	19.4	22.2
Obesity in women (self-reported in % of women)	—	8.9	9.1	13.2	13.4
Obesity in men (self-reported in % of men)	—	8.0	9.1	12.4	16.0
Obesity or overweight girls (% of 11-, 13-, and 15-year-old girls)	—	—	9.8	11.9	11.7
Obesity or overweight boys (% of 11-, 13-, and 15-year-old boys)	—	—	13.9	18.5	17.3

Source. Statistics Austria.

Relatedly, Austria's rate of cardiovascular disease is higher than many other EU countries, with over 10% of men reporting heart or circulation problems within the last 12 months.<sup>12</sup> Among the larger-than-average population of patients experiencing cardiovascular problems, adherence to guideline-recommended cardiovascular therapies is low.<sup>13</sup> In a study of 36829 patients who were hospitalized for heart failure over 10 years, Marzluf et al<sup>13</sup> found that, among patients who were readmitted to the hospital for heart failure (20% and 23%), only 40% adhered to their prescribed beta-blocker schedule and only 16% adhered to the aldosterone antagonists.

### The United States

The United States healthcare system is marked by an out-of-pocket system that requires individuals to pay for insurance and co-pay fees at doctor visits. The out-of-pocket system has resulted in decreased life expectancy, lowered outcomes for men and women,<sup>14</sup> and disparities in quality and care for minorities and individuals in rural or urban settings.<sup>15,16</sup> Further, the system is characterized by employment and income-status, which has led to poor outcomes for populations in lower socioeconomic brackets.<sup>15</sup>

### Life Expectancy

Life expectancy is ranked 34th globally, however significant disparities are evident based on gender and racial and ethnic classifications in the United States (Figure 1).<sup>14</sup> In response, multiple academic researchers have noted that discriminate care models characterize the United States failure in terms of healthcare providence according to gender and race.<sup>17-19</sup> However, despite the push for equality of care and treatment,

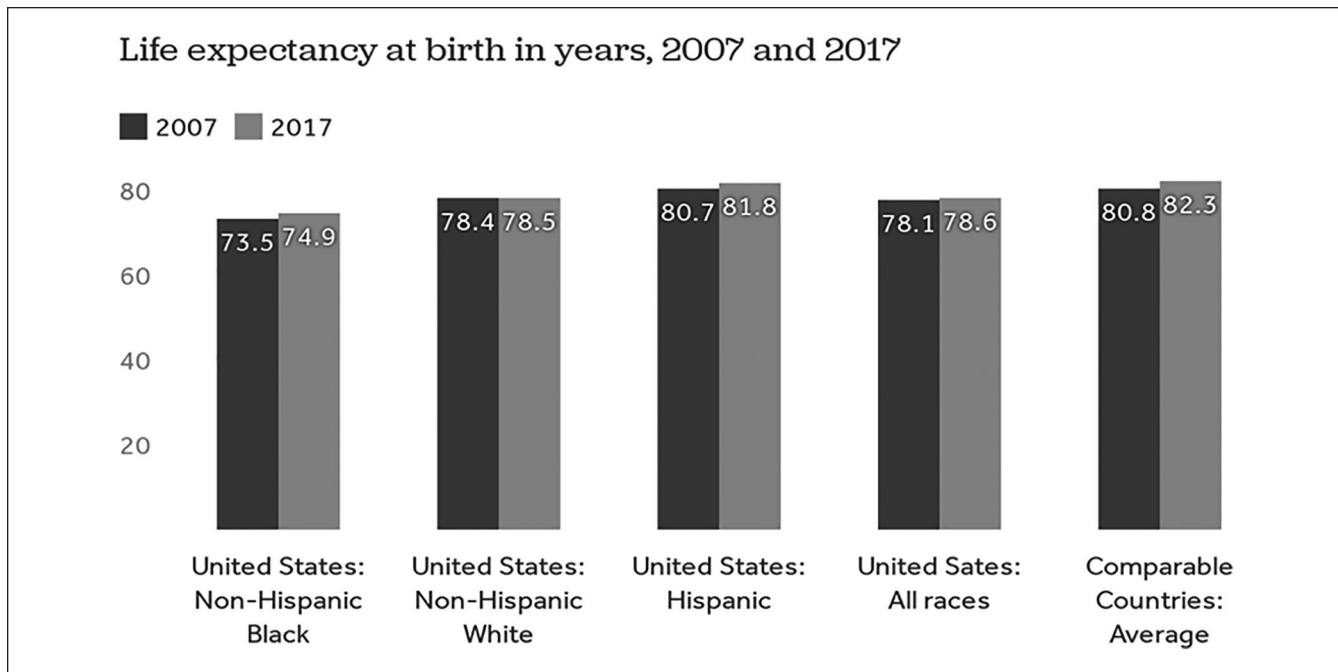
there remains a national and global disparity for treatment of racially diverse populations in the United States.<sup>17-19</sup> In terms of gender and life-expectancy, women are more likely to live longer than men. However, both men and women in terms of gender and life expectancy rank below the global country average.<sup>14</sup> Overall, the United States ranks below the average life expectancy from 1980 to 2015.

### Major Healthcare Issues

The United States has its own unmet healthcare need, namely obesity.<sup>20</sup> Obesity is a major concern in the United States, with 35% of men and 40% of women being obese.<sup>20</sup> Almost 10% of women in the United States rank as falling into class 3 obesity, which means they have a body mass index greater or equal to 40.<sup>20</sup> In a ranking of 50 states in the US and every European country, the lowest 22 rankings for obesity rates all went to European countries. For comparison, Austria had the 7th seventh lowest rank, with 20% population obesity. Almost half of all states in the US have an obesity rate higher than 30%.<sup>21</sup>

Obesity is associated with a number of diseases, including cardiovascular disease, diabetes, and 13 different types of cancer.<sup>22</sup> Cancers associated with obesity include breast, colon, rectum, endometrium, gallbladder, gastric cardia, kidney, liver, ovary, pancreas, and thyroid. In a 2017 study of cancer risk and obesity, Steele et al. found that 40% of all diagnosed cancers were associated with being overweight or obese. Steele et al<sup>22</sup> argue that the high rates of cancer among obese Americans place a huge societal burden on the health care system, resulting in high costs and lower life expectancies.<sup>22</sup>

Similar to Austria, the leading cause of death in the United States is heart disease and cancer.<sup>23</sup> Both cancer and heart



**Figure 1.** Life expectancy of the United States by race from 2007 to 2017.<sup>8</sup>

disease are related to obesity rates.<sup>22</sup> According to the United States Center for Disease Control (CDC), 610 000 people die in the United States from heart disease every year, which accounts for 1 in every 4 deaths.<sup>24</sup> However, according to Sidney et al,<sup>25</sup> mortality related to heart disease is decreasing in the United States, which is likely to result in cancer overtaking heart disease as the leading cause of death.<sup>25</sup>

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## Attributes of the Healthcare System

### Austria

When considered in terms of combined quality and access, the Austrian healthcare system is highly rated.<sup>26</sup> The Healthcare Access and Quality (HAQ) index measures a healthcare's system overall quality and the population's access to healthcare. The HAQ considers 32 causes of death, which are avoidable in the presence of quality healthcare. By analyzing the number of deaths that occur due to preventable diseases, the researchers can approximate the healthcare system's overall quality. According to a 2015 Global Burden of Disease study, healthcare in the world overall is rated at 53.

The Austrian healthcare system is rated at 88. Comparatively, the United States healthcare system is rated at 81.<sup>26</sup>

### Healthcare Spending

Though Austria's per capita healthcare spending is high compared to similar countries, systematic issues (like a lack of primary care coordination or aftercare support) within the health care system may result in negative patient outcomes uncaptured by metrics evaluating the overall population health.<sup>27</sup> For example, in a ranking of primary care coordination, Austria had some of the weakest scores among EU countries.<sup>27</sup> Despite evidence that the Austrian healthcare system would benefit from more effort toward defragmentation, Nolte et al<sup>28</sup> suggested that Austria made substantial improvements in the early 2000s stemming from changes to the financial and regulatory healthcare framework. For example, Austria implemented comprehensive disease management programs that improved coordination of care and took advantage of newly implemented statewide financing instruments. Additionally, Austria provided more support for outpatient care and facilitated the transfer of patients from inpatient to outpatient settings when possible.<sup>28</sup>

Hoffmann et al,<sup>29</sup> assert that different healthcare systems result in different levels of patient access to primary and secondary care providers. Hoffmann et al<sup>29</sup> further explain that Austria's healthcare system lacks a clear delineation between primary and secondary doctors, which can make access points for patients challenging. In a study of over 30 000 patients, Hoffmann et al<sup>29</sup> found that utilization of secondary care providers increased by 7% in 2014 compared to 2017.

The largest increases in the utilization of secondary care providers were seen in demographic groups that historically underutilized such services. This could suggest an increase in overall equity in the health care system or the intentional targeting of underserved populations.<sup>29</sup>

### *The United States*

By utilizing an out-of-pocket healthcare model, the United States sets itself apart from other OCED countries.<sup>2</sup> This model results in low healthcare coverage for the population and high out-of-pocket costs borne by individuals with and without healthcare coverage.<sup>2</sup> Therefore, a key feature of the United States healthcare system is the cost distribution between employees, employers, and the government. This function potentially influences the correlation between income and life expectancy which exists in the United States.<sup>30</sup>

One of the key indicators of failings in the healthcare systems has been the result of the COVID-19 pandemic.<sup>15,31,32</sup> The handling of the pandemic led to differential economic outcomes for citizens of both countries.<sup>15,31,32</sup> However, in the United States, the lack of monetary support and unemployment benefits increased disparities for populations that were unable to meet co-pay for COVID-19 or regular healthcare treatment needs.<sup>15,31,32</sup> Researchers also noted that minority populations and lower socio-economic groups in the United States are more likely to suffer due to the problematic handling of COVID-19.<sup>31</sup>

A secondary key difference between Austria and the United States is the differences in care by geographic location in the United States.<sup>16,33,34</sup> For example, Tyler et al<sup>16</sup> emphasized that rural versus urban areas face differential access and quality of care in terms of healthcare in the United States. Research indicates that healthcare failings in the United States include a lack of care that meets the diverse needs of varied geographic regions.<sup>16,33,34</sup>

### *Out-of-Pocket-System Disparities and Failings*

The most notable characteristics of the United States healthcare systems lies in the out-of-pocket system. Insurance is not compulsory but requires a significant out of pocket expense if an individual does not hold insurance.<sup>16,33,34</sup> Thus, the model creates significant social and economic disparities between the insured and the uninsured.<sup>16,33,34</sup>

Chetty et al<sup>30</sup> concluded that higher-income individuals live substantially longer in the United States than low-income individuals. For study years 2001 to 2014, men in the bottom 1% of income earners had a life expectancy of 78.8 years, while men in the top 1% of income earners had a life expectancy of 88.9 years.<sup>30</sup> A disparity of life expectancy greater than 10 years between high and low earners suggests inequitable access to healthcare and a decreased ability among low-earning populations to access preventative

healthcare, healthy food, clean water, clean air, and enough exercise.

In a survey of 11 different countries, Osborn et al<sup>3</sup> found that substantially more Americans elected not to receive medical care due to cost than patients in any other studied country. Among the 10 highest GDP countries in the world, 33% of Americans went without recommended healthcare treatments due to cost, while only 7% of the patients in the United Kingdom declined care. In addition to the practical challenges of affording health coverage, Osborn et al<sup>3</sup> found that more Americans reporting feeling like they had poor health and resulting emotional distress.

### *Prescription Drug Cost*

Prescription drug costs in the United States make up a substantial portion of the financial burden on patients.<sup>35</sup> Papanicolas et al<sup>35</sup> found that United States spending on pharmaceuticals per capita was \$1443. Meanwhile, countries with similarly high GDPs ranged from \$466 to \$939 per capita. The growth rate of United States spending related to prescription drugs is steep, with a 12.2% increase in 2014 alone.<sup>36</sup>

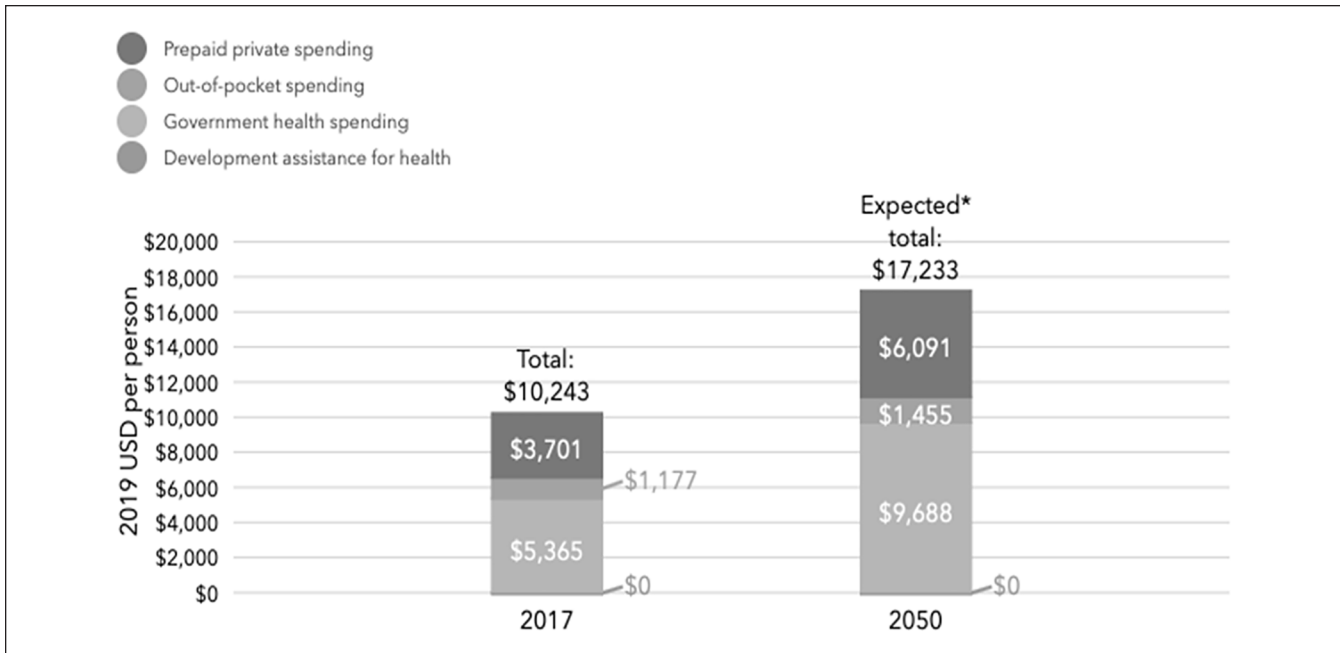
According to Osborn et al,<sup>3</sup> a benefit of the American healthcare system is faster access to specialist care and coordination between hospitals and other healthcare providers. According to the 2016 Commonwealth Fund report on international healthcare statistics, 7% of Americans waited longer than 4 months for necessary surgery. While this number is not the highest among the top 10 GDP countries, it is also not the lowest.<sup>37</sup> Only 4% of patients in Switzerland waited longer than 4 months, compared to 15% in New Zealand. Further research may be necessary to establish increased access to specialist care as a benefit of the United States healthcare system.<sup>3</sup>

However, planning and coordination appear to be a strong point in the American healthcare system.<sup>37</sup> According to the same Commonwealth Fund report,<sup>37</sup> Americans were more likely than patients in other top 10 GDP countries to receive a care plan they were capable of implementing in their daily life. Additionally, patients were less likely to receive a gap in healthcare services after being discharged from the hospital. Finally, American's had substantially greater access to medical advice between doctors' visits. According to the Commonwealth Fund,<sup>37</sup> 83% of patients experienced between visit access compared to only 43% of patients in Germany (the lowest percent of the top 10 GDP countries).

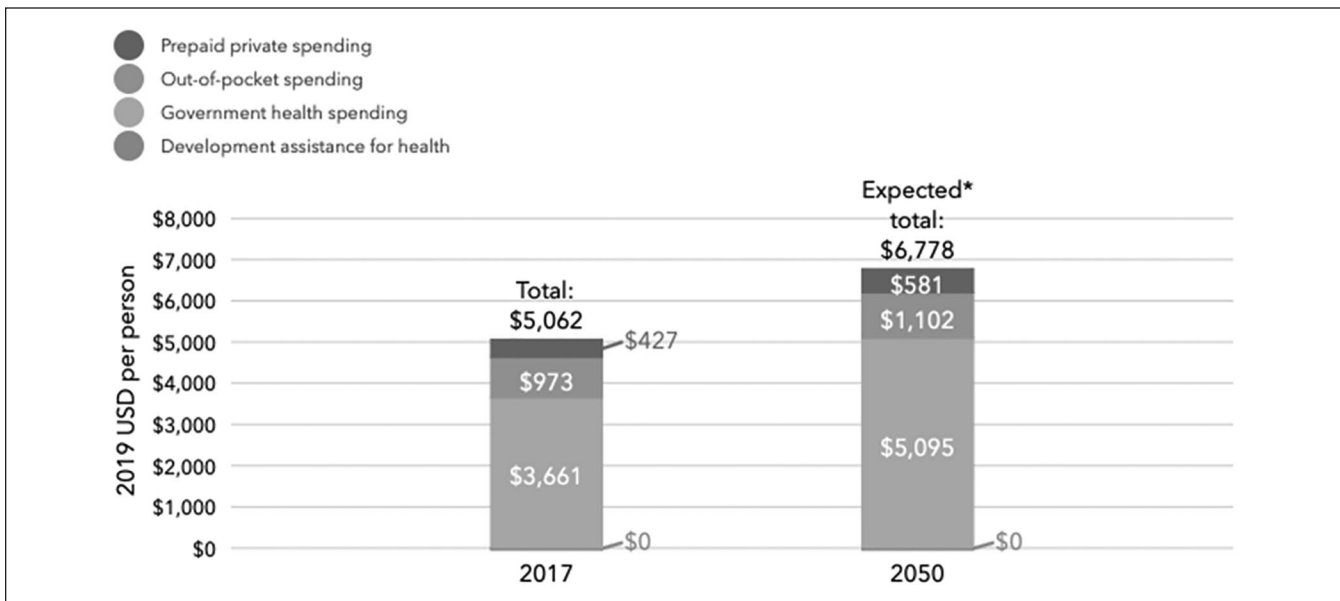
## **Analysis**

### *Research Question 1*

In terms of addressing the geographic differences between the United States and Austria. Figures 2 and 3 demonstrate the key difference between the 2 countries in terms of healthcare spending. In Figure 2, the spending for the United States



**Figure 2.** United States healthcare spending currently and projected.  
 Note. Financial Global Health Database (2019).

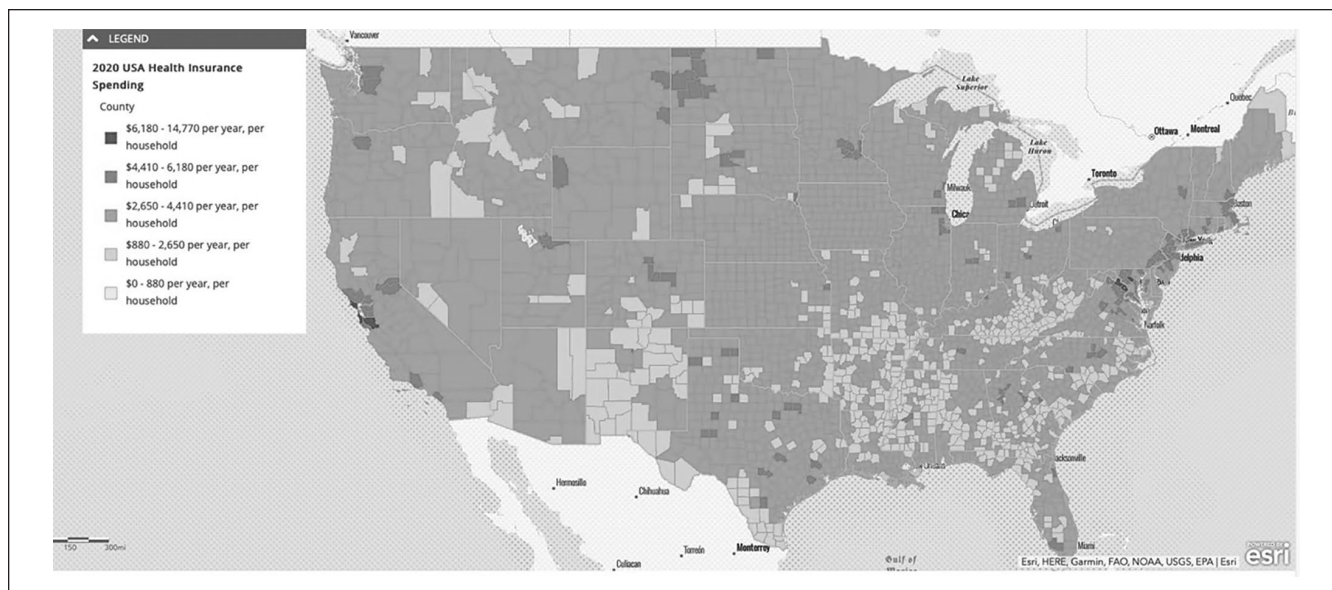


**Figure 3.** Austria healthcare spending currently and projected.  
 Note. Financial Global Health Database (2019).

is divided by prepaid private spending, out of pocket spending, government health spending, and development assistance for health. Citizens in the United States, as of 2017, spend \$1177 dollars out of pocket, which is projected to rise to \$1455 in 2050.

Figure 3 demonstrates the same data for 2017 and 2020, but for the country of Austria. In Figure 3, the spending on out of pocket was \$973 in 2017 but is projected to rise to

\$1102 by 2050. Further comparison of spending for Austria is a total of \$5062 spending for 2017, but the United States was a total of \$10243 in 2017. These findings demonstrate the critical difference in healthcare spending between the 2 countries. Notably, each country has differing forms of healthcare providence, but the policies and regulations in the United States place the burden of financial payment on the citizen rather than the government.



**Figure 4.** 2020 United States health insurance spending by population.

Note. Created for the Purpose of this Study.

Comparing the financial differences in spending between Austria and Healthcare globally demonstrates key outcomes of healthcare systems. However, the burden on the United States citizen is more dramatically shifted toward low socio-economic and minority groups disparately across states (Figure 4).

Figure 4 demonstrates geographic information systems data that demonstrates healthcare spending by population and state in the United States. Close examination of each county demonstrates differentially spending based on population, but also factors such as minority and socio-economic status. These findings demonstrated in Figures 2 to 4 are corroborated by researchers that illustrates that the healthcare policies implemented in the United States are more likely to impact minority and socio-economic status, which also leads to an increase in morbidity and mortality based on these statuses.<sup>35-38</sup>

From the reviewed literature, there is also evidence of disease morbidity and burden differences between each country. However, further research is required to understand how healthcare models and policies may increase the burden experienced in each country. For example, the review of literature determined that the leading cause of death in both Austria and the United States is cardiovascular disease and cancer.<sup>23</sup> The rate of cardiovascular disease is high worldwide, with cancer as an increasingly close second.<sup>22</sup>

However, the societal norms which could influence the high rates of cardiovascular disease in Austria and the United States may be different. Austrians smoked at a comparatively high rate worldwide, while Americans smoked at a rate that was lower than average. Meanwhile, the rate of obesity in

Austria was comparatively low, while obesity in the United States was exceptionally high.<sup>20</sup> Both smoking and obesity are linked to cardiovascular disease.<sup>22</sup> Though no study directly compared the causes of cardiovascular disease in Austria and the United States, the countries experience differing risk factors and similar contraction rates.

### Research Question 2

Austria and the United States are similar in that the population disproportionately suffer from unhealthy lifestyle choices, which are less prevalent in other parts of the world.<sup>20</sup> For Austria, the disproportionate healthcare impact comes from the high rates of smoking.<sup>10</sup> According to Celermajer and Nasir-Ahmad,<sup>10</sup> Austria's prevailing problem with tobacco usage, particularly among young adults, potentially stemmed from a reluctance to adopt prohibitions on smoking in public places, which took place in many other EU and North American countries. By allowing people to smoke in restaurants and bars until 2015, Austria's regulatory policy potentially made it more likely that a new generation of young adults would take up smoking as a common practice.

However, Celermajer and Nasir-Ahmad<sup>10</sup> further articulate that these regulatory lapses were largely corrected in 2015. By adjusting the rules regarding smoking and providing a large portion of the population with enough healthcare access, Austria took real steps to address a major societally driven healthcare concern.<sup>11</sup> Future research should focus on determining if the regulatory changes result in reduced rates of smoking. If so, future studies could additionally consider if the population experiences lower rates of smoking-related cancers and cardiovascular disease.

**Table 3.** Key Differences between Austria and the United States (Created for this Study).

Austria	United States
Publicly funded healthcare	Out-of-pocket healthcare model
Low prescription drug cost	Prescription drug cost
Low out of pocket costs	High out of pocket costs
Supplementary healthcare options were available	Socio-economic divide based on insured and uninsured models
Poor primary care coordination or aftercare support	Increased gender and racial disparities due to the out-of-pocket healthcare model
Equality of care by the providence of universal healthcare for all citizens	Healthcare disparities are based on geographic location (eg, urban and rural regions)
Poor access to primary visits and medical advice	Greater access to medical visits and advice
Equality of care by the providence of universal healthcare for all citizens	Increased gender and racial disparities due to the out-of-pocket healthcare model
Increased life expectancy	Lowered life expectancy

The United States has some of the highest rates of obesity in the world.<sup>21</sup> This is a serious health concern for the country, as obesity is related to higher rates of diabetes, cancer, and cardiovascular disease. According to the Americans with Diabetes Act (2018), Diabetes alone cost the United States \$327 billion dollars in 2017, including government costs, patient costs, and lost earning potential. Unfortunately, there is likely no single policy change that could effectively curb the United States' problem with obesity, as people worldwide are increasingly overweight.<sup>5</sup>

Unfortunately, the problem of obesity in the United States is still largely unaddressed.<sup>20</sup> Rate of obesity in the United States spiked between 1980 and 2000. It continued to increase substantially until 2004. The rate of increase appeared to level off for men and women in 2011 and 2012 but increased again for women between 2013 and 2014.<sup>20</sup> Therefore, though the rates of obesity are not increasing as consistently or as quickly as they did between 1980 and 2004, there is no evidence of declining obesity in the United States as a whole. Additionally, obesity continues to impact the population disproportionately, with lower-income individuals experiencing greater increases than higher-income individuals.<sup>20</sup>

### Research Question Three

The healthcare systems in the United States and Austria have strengths and weaknesses when compared to the other country. Table 3 illustrates the key differences discussed between each of the countries.

Overall, Austria's healthcare system has a higher HAQ ranking than the United States.<sup>26</sup> This ranking includes both overall patient access to healthcare and the quality of healthcare received when accessed.<sup>26</sup> Austrian patients had greater access to healthcare than American patients and received healthcare at a much lower out of pocket cost.<sup>2</sup>

According to Ozcan and Khushalani,<sup>2</sup> these differences likely result from the United States' choice to use an out-of-pocket model for healthcare coverage. Americans pay high

prices for prescription drugs and are more likely to go without medical care due to cost than patients in any other top 10 GDP country.<sup>26</sup> Based on the high cost and low access, it is reasonable to assume that the United States' respectable HAQ ranking is likely due to high-quality care if a patient is able to receive it.<sup>26</sup> In short, the United States healthcare system could benefit from adopting a healthcare coverage model that expands access, potentially similar to the model used in Austria.

However, the Austrian healthcare system could benefit from increased coordination between primary and secondary care providers.<sup>27</sup> In the early 2000s, the Austrian healthcare system suffered from the fragmentation of services, which Nolte et al<sup>28</sup> claimed was improved after a shift in regulation. Though the United States is not immune to challenges from fragmentation, the American healthcare system results in patients who receive care at high rates after being discharged from the hospital and are able to ask their doctors questions between visits.<sup>23</sup> However, the disparities of care in terms of socio-economic status, gender, and minority status are considered pervasive issues that supersede access to primary care.<sup>7,34</sup> In order to improve the Austrian healthcare system, regulators could look to American standards of communication and care coordination to improve the healthcare system overall.

In terms of diagnostic ability and treatment success, literature revealed little substantial difference between Austria and the United States. Patients with diabetes in the United States had better outcomes than Austrian patients, though Austrians contracted the disease at a lower rate.<sup>38</sup> As previously mentioned, United States patients had higher rates of cancer survival than European patients in the early 2000s,<sup>39</sup> but Austria overtook the United States in survival rates for lung, colorectal, prostate, and stomach cancer.<sup>40</sup> The United States has better survival rates than Austria for other types of cancers, such as colon and breast.<sup>40</sup> These findings suggest that, while each country has strengths and weaknesses in cancer survivability, 1 system does not necessarily produce systematically higher survival odds.



## Conclusion

While the Austrian healthcare system is more highly rated than the United States system in terms of access and quality, neither system is without weaknesses. Both countries experience high rates of cardiovascular disease and cancer. A major difference in Austrian and the United States' societal driven healthcare needs is that Austrians have a greater population of smokers. In comparison, the United States has a greater population of obese individuals.

Since the early 2000s, both countries have made substantial improvements in their cardiovascular disease treatment. However, cancer continues to be prevalent in both countries, and the mortality rates of cancer patients have not declined at the same speed as mortality due to cardiovascular disease. The literature did not demonstrate superiority in either Austria or the United States treatment of cancer or cardiovascular disease, though the United States did have better patient outcomes for diabetes.

In terms of system outcomes, Austria has better patient access to healthcare and lower costs. Patients in the United States are burdened with very high prescription drug costs and are more likely to refuse recommended care due to cost. However, the care American's do receive may be more coordinated, as Americans are less likely to experience gaps in care after leaving the hospital. Additionally, Americans experience shorter wait times for necessary surgeries and are better able to contact their doctors between visits.

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