Healthcare Openness and Access Project 2020

Prerelease

Jared M. Rhoads, Darcy N. Bryan, and Robert F. Graboyes

MERCATUS WORKING PAPER

In response to the quickly escalating disruptions to the US healthcare system from the COVID-19 pandemic, the Mercatus Center has decided to release a working-paper version of its forthcoming 2020 edition of the Healthcare Openness and Access Project (HOAP). This prerelease version has not been peer reviewed. The opinions expressed in Mercatus Working Papers are the authors' and do not represent official positions of the Mercatus Center or George Mason University.

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Abstract

The Healthcare Openness and Access Project (HOAP) is a collection of state-by-state comparative data on the flexibility and discretion that US patients and providers have in seeking and delivering healthcare. HOAP combines these data to produce 41 indicators of openness and accessibility. In turn, these indicators are aggregated into 5 broad categories (Professional Regulation, Institutional Regulation, Patient Regulation, Payment Regulation, and Delivery Regulation), which in combination form the overall HOAP index. In addition, there are 7 indicators grouped under the title "Watchlist"—variables worth tracking, but not incorporated at this time into the categories or overall index. The indicators, categories, and overall index are all scored on a 1-to-5 Likert scale. Using the data provided on HOAP's website, readers may adjust the weight given to each indicator to custom-build subjective measures and rankings that differ from the ones presented in this paper. The authors have substantially revised and expanded the list of indicators since HOAP 2016 and HOAP 2018, as well as revising some of the previous data. In addition, HOAP 2020 replaces the previous 10 subindexes with 5 new categories. Therefore, the 2020 rankings are not directly comparable with prior HOAP rankings.

JEL codes: H75, I18, J44, K2, O38, H7, I1, O3

Keywords: health, healthcare, Medicaid, public health, regulation, health professional, occupational licensing, hospital, medicine, nurse practitioner, pharmacist, optician, physician, telemedicine, health insurance, certificate of need, health data

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This paper can be accessed at https://www.mercatus.org/HOAP.

Healthcare Openness and Access Project 2020: Prerelease

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Foreword

March 24, 2020

The Mercatus Center is prereleasing this non-peer-reviewed version of its long-planned 2020 edition of the Healthcare Openness and Access Project (HOAP). We do so in hopes of giving policymakers ideas on how to stretch their healthcare resources as COVID-19 (novel coronavirus) sweeps the country. We still plan to release the full, peer-reviewed version of HOAP 2020 in the summer.

In a few short weeks, COVID-19 has burst forth from China, swept across more than 100 countries, including Western Europe, and begun spreading across the United States. To slow the contagion and prevent it from overwhelming healthcare systems (as it has in Italy), large swaths of the world economy have begun shutting down. People are staying home, as social distancing and self-isolation become the keys to "flattening the curve."

We consider an alternative strategy "raising the ceiling"—increasing healthcare system capacity, thus lessening the need to flatten the curve. Healthcare research at Mercatus focuses heavily on policies aimed at maximizing the capacity of patients and providers to improvise and innovate. As we write, federal and state governments are suspending many of the restrictions that inhibit openness and accessibility. The Trump administration is issuing regulations to allow doctors, nurses, and other healthcare providers to treat patients across state lines. The administration is also exploring ways to jump-start the practice of telemedicine—care delivered

through smartphones, tablets, or laptops. Federal officials are looking into ways to accelerate the FDA's process for approving vaccines and other drugs.

HOAP focuses on healthcare laws and regulations at the state level, and many of the questions HOAP addresses are central to policy actions and discussions related to COVID-19. Under emergency powers, for example, Governor Gretchen Whitmer of Michigan has ordered relaxation of regulations regarding certificates of need, professional licensure, continuing medical education requirements, and scope of practice. In Massachusetts, Governor Charlie Baker has expanded scope of practice for pharmacists, extended the licenses of various health professionals, and expedited licensing for out-of-state providers. Other states have acted in similar ways or are contemplating similar actions.

HOAP enables policymakers to quickly learn how their peers in other states have expanded openness and access and to contemplate potential shortcomings in their own states' healthcare environment. We wish to provide those policymakers with the best possible data as they pursue ideas at breakneck speed.

The full, peer-reviewed version of HOAP 2020 is still scheduled to be released this summer. However, we recognize that the battle against COVID-19 will change the state policy landscape at least temporarily and perhaps permanently. The full version will consider the laws on the books as of November 2019, and we do not plan to revise the HOAP data between now and the release of the peer-reviewed version. Therefore we must recognize that some data and discussion in the full HOAP 2020 edition may be out of date.

In the meantime, we invite state lawmakers and regulators to look at the policy indicators that we have identified for HOAP (listed below) and ask which could be used to inspire and guide action in their states. As these indicators were chosen months ago, long before the current

crisis, they are capable of not just helping states respond to the immediate situation but also strengthening healthcare openness and access in the long term.

Structure of HOAP

- The HOAP index score is the average of the five category scores.
- Each category's score is the average of its lettered indicators.
- NOTE: The policy indicators included in HOAP, shown below, can help guide state policy during the COVID-19 pandemic.

1) Professional Regulation

a) State allows medical licensure reciprocity with other states

b) State has fewer continuing medical education requirements

c) State grants nurse practitioners broad scope of practice

d) State has fewer optician licensing requirements

e) State grants behavioral health providers broad scope of practice

f) State grants midwives broad scope of practice

g) State grants pharmacists broad scope of practice

h) State grants dental hygienists broad scope of practice

i) State has less restrictive licensing of certified registered nurse anesthetists

j) State limits liability for charity caregivers

2) Institutional Regulation

a) State has fewer certificate-of-need restrictions

b) State puts fewer restrictions on compounding pharmacies

c) State does not mandate payers submit data to an all-payer claims database

d) State has fewer provider taxes

e) State allows entrepreneurial business structures

f) State does not have mandatory generic substitution laws

3) Patient Regulation

a) State allows access to CBD oil

b) State allows access to oral contraceptives without physician prescription

c) State has lower excise taxes on e-cigarettes

d) State allows access to naloxone

e) State offers protection for Good Samaritans

f) State has Free Speech In Medicine law

4) Payment Regulation

a) State mandates fewer health insurance benefits

b) State does not expand on federal age rating limitations

c) State has fewer health savings account (HSA) taxes

d) State has less medical taxation

e) State does not mandate that individuals buy health insurance

f) State does not restrict short-term renewable health plans

g) State allows drug manufacturer copay coupons

h) State allows insurers in other states to issue health insurance in the state

i) State allows prescription drug reimportation

5) Delivery Regulation

a) State reimburses Medicaid providers at parity for store-and-forward telemedicine

b) State has less restrictive telepresenter requirements

c) State reimburses Medicaid providers at parity for remote monitoring

d) State allows online prescribing

e) State allows broad Medicaid reimbursement by provider type

f) State has less restrictive telepharmacy location laws

g) State allows online eye exams

h) State does not treat DPC as insurance

i) State allows DPC drug dispensing

j) State allows DPC wholesale lab pricing

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Introduction

There is broad agreement in the United States that it would be desirable to lower the cost of healthcare, improve the quality of care, and broaden health insurance coverage. There is much disagreement, however, about how this trio of goals is to be accomplished. The years-long political struggle over the Affordable Care Act (ACA) is the most visible manifestation of this divergence of views. The ACA represents one approach to tackling the three goals. Many on the political left argue for still more centralized public-sector control over healthcare and particularly for a federal single-payer insurance system or, at least, an option for Americans to purchase a policy from the government rather than from a private insurer. Policymakers and commentators on the right have offered a variety of proposals that, generally speaking, would shift more power to private-sector entities and to states. All these proposals have one thing in common, however: they assume the key to lower costs and better care lies in reconfiguring the insurance system.

We believe the three goals of healthcare reform cannot be attained by focusing solely, or even primarily, on health insurance reform. States have substantial control over the delivery of healthcare and not solely or principally in the area of insurance reform. To make optimal use of state powers in improving care, it is vital to have a basis for comparison to see what works in other states. The Healthcare Openness and Access Project (HOAP) is a set of tools providing state-by-state measures of the flexibility and discretion that patients and providers have in managing health and healthcare. In other words, HOAP seeks to answer the following questions: how open are each state's laws and regulations to institutional variation in the delivery of care,

and how much access to varying modes of care does this openness confer on the state's patients and providers?

Five motives prompted HOAP's creation:

- *Insurance isn't everything.* Simultaneous progress on the three goals of healthcare reform—lower costs, higher quality, and broader coverage—will require fundamental changes in the technologies and structures of care and in how, where, when, and why care is delivered. Those fundamental changes will be most effective, we believe, not as top-down mandates based on centralized expertise, but rather as the result of a vast constellation of patients and providers innovating and experimenting to an unprecedented degree. HOAP highlights institutional features that help determine the degree to which such experimentation is currently possible.
- *States matter.* States possess great power to determine which providers perform what services, the means by which they do so, their legal responsibilities in the event that patients suffer harm, and so forth. The HOAP index and its categories suggest how the states differ in encouraging delivery-system innovation. To be sure, insurance is part of the equation, and HOAP data do include some insurance-related variables.
- *Perception is not reality.* Perceptions about states do not always accord with reality. A leftward tilt in the ACA debate does not necessarily correlate with tight centralized control of healthcare at the state level. Nor does a rightward tilt in the debate always comport with extensive patient-provider discretion. For example, HOAP data suggest that "blue" states Oregon and Hawaii offer broad leeway to patients and providers, whereas "red" states Arkansas and Kentucky have some of the most restrictive healthcare laws and regulations in the nation.

- *Comparisons help.* HOAP as a whole provides a great deal of comparative data on healthcare policy in the states. It is a one-stop source of information on policy differences around the country. As an example, 41 states require a physician's signature to prescribe oral contraceptives. So, to many, that requirement may seem to be the natural order of things—a universal. But 10 jurisdictions (including the District of Columbia) allow pharmacists to autonomously prescribe oral contraceptives. Perhaps this anomaly will persuade policymakers in other states to at least ask how that market functions in the other states. Does giving this power to pharmacists cause prices to drop? Are there measurable effects on health, either positive or negative? How do patients and providers in the 10 jurisdictions feel about this enhanced power for pharmacists?
- *Discussion is valuable.* We are delighted when HOAP becomes a catalyst for discussion. We do not present the index as the definitive measure of openness, access, flexibility, or discretion in healthcare for any particular state. Rather, it is a first pass, an approximation, a point of departure. If observers question aspects of the index and offer alternatives, then the project will have done its job.

In 1883, the great physicist and engineer Lord Kelvin famously stated what has since become known as Lord Kelvin's dictum: "When you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind; it may be the beginning of knowledge, but you have scarcely, in your thoughts, advanced to the stage of science, whatever the matter may be."[1]

[1] Lord Kelvin, "Electrical Units of Measurement" (lecture at the Institution of Civil Engineers, May 3, 1883), in *Popular Lectures and Addresses*, ed. Sir William Thomson (London: Macmillan, 1889), 73.

We offer HOAP in the spirit that Lord Kelvin expressed. At the same time, we humbly keep in mind the addendum offered decades later by the great economist Frank Knight: "And when you can measure, your knowledge is of a meager and unsatisfactory kind."[2]

Project Design

The overall HOAP index is the average of five equally weighted categories, each of which measures the discretion patients and providers have over broad areas of healthcare. We describe each category and its component indicators in detail later on. The equal weighting is purposeful: it is an explicit recognition that no single set of weights should be considered "correct." In any project of this type, the menu of component variables is somewhat arbitrary and subjective. We have constructed HOAP so readers and researchers can, if they wish, alter those weights to reflect their own preferences. It would please us to find others using HOAP data to devise alternative indexes whose findings deviate from ours.

The categories are, in turn, averages of equally weighted indicators. The Professional Regulation Category, for example, is the average of 10 indicators related to controls on healthcare professionals. The 41 indicators (which are really subcategories) are calculated in a variety of ways from various data sources. Details on data sources and calculations are provided in later sections, and further technical information is available on the HOAP website.[3]

A list showing the 5 categories and 41 indicators that comprise the overall HOAP index is found on page 6, immediately following the Foreword.

[2] Deirdre McCloskey reports a version of this oft-retold quip: Deirdre McCloskey, "One More Step: An Agreeable Reply to Whaples," *Prudentia*, February 2010

[3] The HOAP website can be accessed at https://www.mercatus.org/HOAP.

In addition, the HOAP database has a Watchlist containing state-by-state comparisons of seven other indicators, which we do not integrate into any category or into the overall HOAP index. In some cases, such as surprise billing, we were ambivalent about whether the positives of a given policy exceeded the negatives. In other cases, such as access to medical marijuana, we did not wish to embed such a political hot-button issue into the index.

Watchlist

a) State allows access to medical marijuana
b) State protects individuals against surprise billing
c) State protects patient ownership of health record
d) State does not institute price controls on drugs
e) State law supports freestanding birth centers
f) State allows freestanding emergency rooms
g) State does not require occupational licensing for music therapists

Table 1 presents the state-by-state ranking generated from each state's score in the overall HOAP index. (Note: When we use the term "state," we include the District of Columbia.)

Table 1. HOAP 2020 Overall Rankings And Scores

RANKING AND SCORES FOR THE OVERALL HOAP INDEX						
Rank	**Jurisdiction**	**Score**		**Rank**	**Jurisdiction**	**Score**
1	Colorado	3.95		27	Texas	3.26
2	Arizona	3.71		28	Washington	3.22
3	Utah	3.69		29	Illinois	3.22
4	South Dakota	3.69		30	Louisiana	3.19
5	Idaho	3.67		31	Pennsylvania	3.18
6	Oregon	3.67		32	New Hampshire	3.17
7	Montana	3.65		33	Tennessee	3.17
8	North Dakota	3.64		34	Minnesota	3.15
9	Nebraska	3.58		35	Alabama	3.14
10	Wisconsin	3.57		36	Ohio	3.12
11	Hawaii	3.56		37	Kansas	3.12
12	Michigan	3.56		38	West Virginia	3.12
13	Wyoming	3.50		39	South Carolina	3.08
14	Alaska	3.48		40	Arkansas	3.07
15	Nevada	3.47		41	Delaware	3.06
16	Indiana	3.45		42	California	3.04
16	Iowa	3.45		43	Vermont	2.98
18	Maine	3.42		44	Kentucky	2.96
18	Virginia	3.42		45	Connecticut	2.94
20	Missouri	3.40		46	North Carolina	2.91
21	New Mexico	3.36		47	Florida	2.87
22	Oklahoma	3.36		48	Rhode Island	2.80
23	District of Columbia	3.34		49	New York	2.76
24	Mississippi	3.29		50	Massachusetts	2.58
25	Georgia	3.28		51	New Jersey	2.48
26	Maryland	3.26				

Note: Scores are rounded to the nearest hundredth. There are two pairs of true ties: Indiana and Iowa, and Maine and Virginia.

Caveats and Conclusions

As we have noted, any index of this type necessarily involves a substantial measure of subjectivity and arbitrariness. There is also a degree of ambiguity. Implicitly, a higher score on the overall index or in a particular category suggests "better" conditions than a lower score does, but the reasons for one score being better than the other may not be clear.

For instance, one indicator for the Delivery Regulation Category involves Medicaid reimbursement parity. We take it as beneficial that in some states Medicaid will pay for

telemedicine. But parity itself is problematic. One argument for telemedicine is that it is less costly than traditional office visits. Therefore, if Medicaid pays the same amount for both, it may be depriving telemedicine practices of the ability to compete on the price dimension to push costs downward. To offer another example, our index implies that lower taxes on electronic cigarettes are a positive. We recognize, however, that use of e-cigarettes is controversial and that lower taxes could mean higher usage among people who would otherwise be nicotine free—teenagers, for example. Hence, we include the e-cigarette indicator with reservations.

We use a 1-to-5 Likert scale for all of the indicators, with 5 being the best score. For many indicators, five distinct scores are possible (1, 2, 3, 4, or 5). For some indicators, there are fewer possible scores owing to the nature of the issue or action the indicator measures. For instance, for the indicator measuring the extent to which states allow medical licensure reciprocity with other states, three distinct scores are possible (1, 3, or 5). For the indicator measuring the extent to which states offer protection for Good Samaritans, only two distinct scores are possible (1 or 5). For binary indicators such as the one just mentioned, we could have chosen, say, 2 and 4 as the possible scores, knowing that doing so would reduce these indicators' impact on categories and the overall index. Again, one must choose, and there is no unambiguously correct choice.

While we recognize some haziness in the data, we nevertheless see the results as meaningful information. If one state ranks 3rd and another 4th in the HOAP index, that is rather weak evidence that flexibility is greater in the first state. But if one state ranks 3rd and another ranks 47th, that distinction is more likely to be meaningful.

We decided to omit certain variables because they are so politically charged that their presence might drown out the overall findings and because even among the creators of HOAP

there are strong differences of opinion on the positives and negatives of these issues. Three that come to mind are abortion, assisted suicide, and vaccination exemptions. They are nowhere to be found in this project.

HOAP 2020 is the third iteration of the Healthcare Openness and Access Project (HOAP). HOAP 2016 was published in November 2016. HOAP 2018 was published in June 2018 and reissued with a slight data correction in April 2019. HOAP 2016 and HOAP 2018 were directly comparable, as they used the same indicators (variables) and structure of subindexes and overall index. Any changes in state scores and rankings from HOAP 2016 to HOAP 2018 resulted either from states changing their laws and regulations or from updated data sources.

HOAP 2020 is not directly comparable with the previous two versions. For a variety of reasons, we eliminated or consolidated some of the original indicators and added new ones in order to more appropriately measure each state's level of healthcare regulation. In addition, we replaced the original 10 subindexes with 5 entirely new groupings called categories. The overall HOAP index is now an average of these 5 categories rather than of the previous 10 subindexes. With this change in structure and methodology, there are some substantial shifts in states' scores and rankings. Unfortunately, it is not possible to determine how much these shifts are attributable to actions that states have taken and how much to our change in methodology.

In some ways, the goal of HOAP is to encourage questions rather than to provide definitive answers. HOAP is a journey, not a destination.

1. Professional Regulation

The Professional Regulation Category analyzes how onerous a state's licensure laws are to individuals seeking to practice in several medical professions. Healthcare practitioners ought to have the latitude to offer their professional skills and services without facing undue legal barriers. Lowering the barriers that keep providers out of states' healthcare systems will increase the systems' openness and accessibility to patients as well as providers.

This category is composed of 10 indicators:

a) State allows medical licensure reciprocity with other states
b) State has fewer continuing medical education requirements
c) State grants nurse practitioners broad scope of practice
d) State has fewer optician licensing requirements
e) State grants behavioral health providers broad scope of practice
f) State grants midwives broad scope of practice
g) State grants pharmacists broad scope of practice
h) State grants dental hygienists broad scope of practice
i) State has less restrictive licensing of certified registered nurse anesthetists
j) State limits liability for charity caregivers

Table 2. State Rankings and Scores for the Professional Regulation Category

Rank	Jurisdiction	Score		Rank	Jurisdiction	Score
1	Iowa	4.60		25	Connecticut	3.00
2	Colorado	4.40		25	Illinois	3.00
2	South Dakota	4.40		25	Indiana	3.00
4	Idaho	3.80		25	Nevada	3.00
4	Maine	3.80		31	Alabama	2.90
4	Montana	3.80		31	Hawaii	2.90
7	Utah	3.70		31	New Mexico	2.90
7	Wisconsin	3.70		31	Oklahoma	2.90
9	Maryland	3.60		35	Delaware	2.80
9	Nebraska	3.60		35	Louisiana	2.80
9	North Dakota	3.60		35	Missouri	2.80
9	Pennsylvania	3.60		35	Tennessee	2.80
9	West Virginia	3.60		39	Arkansas	2.70
9	Wyoming	3.60		39	Ohio	2.70
15	Arizona	3.50		39	Rhode Island	2.70
15	Michigan	3.50		39	Vermont	2.70
15	Minnesota	3.50		43	Kentucky	2.60
18	Mississippi	3.40		44	North Carolina	2.50
18	Washington	3.40		44	Virginia	2.50
18	District of Columbia	3.40		46	Georgia	2.40
21	New York	3.30		46	Texas	2.40
22	Kansas	3.20		48	Florida	2.30
22	Oregon	3.20		49	Massachusetts	2.20
24	New Hampshire	3.10		49	New Jersey	2.20
25	Alaska	3.00		49	South Carolina	2.20
25	California	3.00				

Note: Tied ranks reflect tied scores.

a) State Allows Medical Licensure Reciprocity with Other States

A medical license is an occupational license that allows an individual to practice medicine within a defined jurisdiction. States vary in the level of recognition they afford to medical licenses granted by other states. Reciprocity laws are one of the easiest and least controversial ways for states to minimize restraints on physicians, yet a substantial number of states do not allow reciprocity. Not only does this pose a problem for traveling physicians and physicians who practice near state borders, but it also has an unnecessarily restrictive effect on telemedicine (the practice of medicine at a distance through the use of telecommunications technology). The

Interstate Medical Licensure Compact (IMLC) is an agreement between participating states by which licensed physicians can qualify to practice medicine across state lines within participating states if they meet eligibility requirements.

States received one of three possible scores for this indicator: 1, 3, or 5. States that are IMLC members received a score of 5. States that have IMLC legislation introduced (not passed) or implementation delayed received a score of 3. States that do not participate in the IMLC received a score of 1. The data for this indicator come from the IMLC website.[4]

b) State Has Fewer Continuing Medical Education Requirements

Continuing medical education (CME) requirements are state-imposed training requirements professionals must fulfill in order to retain a medical license. CME is promoted as a means to ensure that physicians stay current with changing medical knowledge, but there is some evidence challenging whether it is effective and used properly.[5] States that require fewer CME hours place fewer barriers in the way of medical professionals' ability to practice.

States received one of five possible scores for this indicator: 1, 2, 3, 4, or 5. States without a CME requirement received a score of 5. States that require only 1–19 hours of CME per year received a score of 4. States that require 20–29 hours of CME per year received a score of 3. States that require 30–39 hours of CME per year received a score of 2. States that require 40 or more hours of CME per year received a score of 1. The data for this indicator come from Relias Media.[6]

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[4] Interstate Medical Licensure Compact, "The IMLC," accessed March 23, 2020, https://imlcc.org/.
[5] John C. Sibley et al., "A Randomized Trial of Continuing Medical Education," *New England Journal of Medicine* 306, no. 9 (1982); Bernard S. Bloom, "Effects of Continuing Medical Education on Improving Physician Clinical Care and Patient Health: A Review of Systematic Reviews," *International Journal of Technology Assessment in Health Care* 21, no. 3 (2005).
[6] Relias Media, "Physician CME State Map," accessed December 2019, https://www.reliasmedia.com/pages/cme-state-map.

c) State Grants Nurse Practitioners Broad Scope of Practice

Growing evidence indicates that nurse practitioners (NPs) can perform some primary care services as safely and effectively as physicians perform them, yet some states either limit what NPs are allowed to do or require that they practice under the direct supervision of a physician.[7] States can allow NPs to practice to the full extent of their license and training, or they can restrict them in various ways. Restrictions on NPs' scope of practice generally take the form of regulations delineating which tasks they may perform.

States received one of three possible scores for this indicator: 1, 3, or 5. States that allow NPs to practice to the full extent of their license and training received a score of 5. States that impose "reduced practice" limitations received a score of 3. States that impose "restricted practice" limitations received a score of 1. The data for this indicator come from the map produced by the American Association of Nurse Practitioners.[8]

d) State Has Fewer Optician Licensing Requirements

Opticians are trained individuals who fit and dispense corrective lenses for people with vision problems. States can impose varying licensure requirements on opticians, generally in the form of required training time, required examinations, or both. More restrictive government requirements mean opticians are less free to practice their profession.

States received one of three possible scores for this indicator: 1, 3, or 5. States that require no special license for opticians received a score of 5. States that require opticians to have a license but mandate fewer than 730 days (i.e., two years) of education or experience received a

[7] Julie A. Fairman et al., "Broadening the Scope of Nursing Practice," *New England Journal of Medicine* 364, no. 3 (2011).
[8] American Association of Nurse Practitioners, "Nurse Practitioner State Practice Environment," accessed December 2019, https://www.aanp.org/advocacy/state/state-practice-environment.

score of 3. States that require opticians to have a license and that mandate more than 730 days of education or experience received a score of 1. The data for this indicator come from a working paper published by the Mercatus Center at George Mason University that analyzes optician licensing requirements.[9]

e) State Grants Behavioral Health Providers Broad Scope of Practice

Education requirements for credentialing as an addiction counselor vary from state to state. Addiction counselors provide addiction recovery support in multiple community settings. Depending on state credentialing requirements, entry into this healthcare service can be made difficult by mandating expensive educational degrees.

States received one of three possible scores for this indicator: 1, 3, or 5. States that require a high school diploma or higher received a score of 5. States that require an associate's degree or higher received a score of 3. States that require a bachelor's degree or higher received a score of 1. The data for this indicator come from a map from Scope of Practice Policy.[10]

f) State Grants Midwives Broad Scope of Practice

Some caregivers who gain experience in midwifery do so through self-study, apprenticeship, or other forms of training that are not officially recognized. States that allow such caregivers to practice midwifery are said to allow direct-entry midwifery. States that do not allow direct-entry

[9] Edward J. Timmons and Anna Mills, "Bringing the Effects of Occupational Licensing into Focus: Optician Licensing in the United States" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, February 2015).
[10] Scope of Practice Policy, "Behavioral Health Providers Overview", accessed December 2019, http://scopeofpracticepolicy.org/practitioners/behavioral-health-providers/.

midwifery deny midwives the ability to practice their profession and deny women the autonomy to make an informed choice about their birthing options.[11]

States received one of three possible scores for this indicator: 1, 3, or 5. States that allow direct-entry midwifery and do not require midwives to have a license received a score of 5. States that allow direct-entry midwifery but require midwives to have a license received a score of 3. States that do not allow direct-entry midwifery received a score of 1. The data for this indicator come from the table produced jointly by the Midwives Alliance of North America and the North American Registry of Midwives.[12]

g) State Grants Pharmacists Broad Scope of Practice

Pharmacists provide a critical skill with their expertise in medications and their interactions with the body. Depending on the state, pharmacists can be granted broad or limited scope of practice with respect to treatment autonomy, thereby enabling or limiting their ability to serve patients. The data for this indicator come from the 2019 National Association of Boards of Pharmacy Survey of Pharmacy Law.[13]

States received one of five possible scores for this indicator: 1, 2, 3, 4, or 5. States with 8 to 9 pharmacist management independence categories received a score of 5. States with 6 to 7 categories received a score of 4. States with 4 to 5 categories received a score of 3. States with 2 to 3 categories received a score of 2. States with only one pharmacist management independence category received a score of 1.

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[11] Sarah Anne Stover, "Born by the Woman, Caught by the Midwife: The Case for Legalizing Direct-Entry Midwifery in All Fifty States," *Health Matrix* 21, no. 1 (2011).
[12] North American Registry of Midwives, "Direct Entry Midwifery State-by-State Legal Status," May 15, 2019, http://narm.org/pdffiles/Statechart.pdf.
[13] National Association of Boards of Pharmacy, *Survey of Pharmacy Law*, 2019, 121–22; there are a total of nine categories for "independent pharmacy practice."

h) State Grants Dental Hygienists Broad Scope of Practice

Depending on the state, dental hygienists can work independently or under the authority of a dentist as a primary oral health professional. Restrictions on dental hygienists' scope of practice generally take the form of regulations delineating which tasks they may perform. States received one of three possible scores for this indicator based on the American Dental Hygienists Association Practice Act Overview Table;[14] the HOAP state rank is based on the majority Likert scale number given to variables "prophylaxis" through "remove sutures," with the more restrictive rank superseding all.

States received one of three possible scores for this indicator: 1, 3, or 5. States that allow dental hygienists to provide patient care independent of a dentist or a collaborative practice received a score of 5. States in which general supervision by a dentist is required to authorize a procedure but a dentist does not need to be present received a score of 3. States in which direct, personal, or indirect supervision levels are required with a dentist needing to be present received a score of 1. The data for this indicator come from the American Dental Hygienists Association.[15]

i) State Has Less Restrictive Licensing of Certified Registered Nurse Anesthetists

Nurse anesthetists are advanced practice nurses that administer anesthesia for surgery and other medical procedures. Education requirements for a nurse anesthetist vary depending on the state and can act as a barrier to entry into this profession.

[14] American Dental Hygienist Association, "Dental Hygiene Practice Act Overview: Permitted Functions and Supervision Levels by State," accessed December 2019, http://www.adha.org/resources-docs/7511_Permitted_Services_Supervision_Levels_by_State.pdf.
[15] American Dental Hygienists Association, "Dental Hygiene Practice Act Overview."

States received one of two possible scores for this indicator: 1 or 5. States that do not require a master's degree received a score of 5. States that require a master's degree received a score of 1. The data for this indicator come from the American Association of Nurse Anesthetists.[16]

j) State Limits Liability for Charity Caregivers

Many retired and practicing physicians want to volunteer their time and expertise in caring for underserved populations. However, the cost of malpractice insurance is prohibitive, acting as an effective barrier to growing a volunteer physician workforce that would expand access for impoverished patients. Some states have sought to mitigate this risk by enacting protective liability legislation for physician volunteers.

States received one of three possible scores for this indicator: 1, 3, or 5. States that regard volunteer physicians providing gratuitous care as employees of the state for purposes of liability claims or that provide liability insurance receive a score of 5. States that provide limited immunity from civil liability laws to volunteer physicians received a score of 3. States that have no provisions regarding volunteer physician liability received a score of 1. The data for this indicator come from the American Medical Association.[17]

[16] American Association of Nurse Anesthetists, "Advanced Education Requirements," accessed December 2019, https://www.aana.com/docs/default-source/sga-aana-com-web-documents-(all)/advancededucationrequirements.pdf?sfvrsn=d0e448b1_8.
[17] American Medical Association, "Licensing Provisions and Liability Laws for Senior and Volunteer Physicians," accessed December 2019, https://www.ama-assn.org/sites/ama-assn.org/files/corp/media-browser/public/government/advocacy/licensing-provisions-liability-laws-sr-volunteer-physicians.pdf.

2. Institutional Regulation

The Institutional Regulation Category measures the extent to which state laws liberate or restrict healthcare institutions such as hospitals, pharmacies, insurance companies, and others. To maximize competition and innovation, these institutions should be able to make business investments and expansions as they see fit, including designing new services and lines of business, and either profit by creating value or bear their own losses.

This category is composed of six indicators:

a) State has fewer certificate-of-need restrictions
b) State puts fewer restrictions on compounding pharmacies
c) State does not mandate payers submit data to an all-payer claims database
d) State has fewer provider taxes
e) State allows entrepreneurial business structures
f) State does not have mandatory generic substitution laws

Table 3. State Rankings and Scores for the Institutional Regulation Category

Rank	Jurisdiction	Score		Rank	Jurisdiction	Score
1	Arizona	4.17		26	Tennessee	3.17
1	Virginia	4.17		28	Alabama	3.00
3	Wyoming	4.00		28	Delaware	3.00
4	Alaska	3.83		28	Utah	3.00
4	Idaho	3.83		31	Illinois	2.83
4	Nebraska	3.83		31	Mississippi	2.83
4	North Dakota	3.83		31	District of Columbia	2.83
4	South Dakota	3.83		34	Kansas	2.67
4	Wisconsin	3.83		34	Louisiana	2.67
10	Indiana	3.67		34	North Carolina	2.67
10	Michigan	3.67		37	Arkansas	2.33
10	New Hampshire	3.67		37	Pennsylvania	2.33
13	Colorado	3.50		39	Connecticut	2.17
13	Georgia	3.50		39	Florida	2.17
13	Hawaii	3.50		41	Maine	2.00
13	Montana	3.50		41	Maryland	2.00
13	New Mexico	3.50		41	Minnesota	2.00
13	Ohio	3.50		41	New Jersey	2.00
13	South Carolina	3.50		45	Kentucky	1.83
20	California	3.33		45	Rhode Island	1.83
20	Missouri	3.33		45	Vermont	1.83
20	Nevada	3.33		48	West Virginia	1.67
20	Oklahoma	3.33		49	Massachusetts	1.50
20	Oregon	3.33		49	Washington	1.50
20	Texas	3.33		51	New York	1.17
26	Iowa	3.17				

Note: Tied ranks reflect tied scores.

a) State Has Fewer Certificate-of-Need Restrictions

Certificate-of-need (CON) laws are laws that require healthcare providers to seek approval from their state government before making new investments in facilities, equipment, and services. The idea is to empower the state to determine whether such investments are economically necessary. In years past, many states adopted CON laws to limit the healthcare infrastructure in their regions and align the industry with "public need."[18] It is arguable, however, whether CON laws

[18] Pamela C. Smith and Dana A. Forgione, "The Development of Certificate of Need Legislation," *Journal of Health Care Finance* 36, no. 2 (2009); Patrick A. Rivers, Myron D. Fottler, and Mustafa Zeedan Younis, "Does Certificate of Need Really Contain Hospital Costs in the United States?," *Health Education Journal* 66, no. 3 (2007).

have achieved their practical goal. Some studies suggest that CON laws have resulted in modest cost containment, while other studies have found that CON laws have in fact raised total healthcare spending by limiting competition and enabling prices to rise.[19]

States received one of five possible scores for this indicator: 1, 2, 3, 4, or 5. States' scores for this indicator were determined by the number of services that they subject to CON laws. States that have no CON laws received a score of 5. States in which 1 to 5 services are subject to CON regulations received a score of 4. States in which 6 to 9 services are subject to CON regulations received a score of 3. States in which 10 to 19 services are subject to CON regulation received a score of 2. States in which 20 or more services are subject to CON regulation received a score of 1. The data for this indicator come from the National Conference of State Legislatures.[20]

b) State Puts Fewer Restrictions on Compounding Pharmacies

Compounding pharmacies are laboratories in which pharmacists mix drugs to create custom medications for patients. The FDA defines a sterile drug compounding pharmacy as a facility in which a pharmacist "combines, mixes, or alters ingredients of a drug to create a medication tailored to the needs of an individual patient."[21] Compounding pharmacies are an important part of the healthcare delivery system. However, many states put restrictions on compounding

[19] James Bailey, "Can Health Spending Be Reined In through Supply Constraints? An Evaluation of Certificate-of-Need Laws" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, July 2016); Christopher J. Conover and Frank A. Sloan, "Does Removing Certificate-of-Need Regulations Lead to a Surge in Health Care Spending?," *Journal of Health Politics, Policy and Law* 23, no. 3 (1998).
[20] Christopher Koopman and Anne Philpot, "The State of Certificate-of-Need Laws in 2016," Mercatus Center at George Mason University, September 27, 2016. See also American Health Planning Association, *2016 National Directory: Certificate of Need Programs, Health Planning Agencies*, 2016; Matthew D. Mitchell and Christopher Koopman, "40 Years of Certificate-of-Need Laws across America," Mercatus Center at George Mason University, September 27, 2016.
[21] US Food and Drug Administration, "Compounding and the FDA: Questions and Answers," June 21, 2018, https://www.fda.gov/drugs/human-drug-compounding/compounding-and-fda-questions-and-answers.

practices, rather than allowing pharmacies to adopt or innovate new methods for producing drugs more efficiently and at lower costs. One such restriction is prohibiting facilities from making sterile office stock, which means pharmacists are not allowed to make more product than that for which they have orders at a given time. This restriction forces pharmacists to make small batches of new product for each order, which is less efficient and more expensive than making larger batches and storing them to fill future orders.

States received one of two possible scores for this indicator: 1 or 5. States that allow sterile office stock compounding received a score of 5. States that prohibit sterile office stock compounding received a score of 1.[22] The data for this indicator come from a 2018 report from the Pew Charitable Trusts and the National Association of Boards of Pharmacy.[23]

c) State Does Not Mandate Payers Submit Data to an All-Payer Claims Database

An all-payer claims database (APCD) is a large database that holds information about health insurance claims collected from private and public payers. Types of claims can include medical claims, pharmacy claims, dental claims, and data about eligibility. Most APCDs are run at a state level, with the goal of bringing together health payment and utilization information for study and comparison. Some APCDs are operated on a voluntary basis. In other states, participation is mandatory. Submitting data to an APCD is not a trivial matter of compliance. The effort required can be substantial, especially when APCD reporting requirements ask for information that

[22] United States Pharmacopeia Chapter 797 describes conditions and practices meant to prevent patients from suffering harm that could result from microbial contamination, excessive bacterial endotoxins, variability in intended strength, unintended chemical and physical contaminants, and ingredients of inappropriate quality in compounded sterile preparations.

[23] A. Simon Pickard et al., "National Assessment of State Oversight of Sterile Drug Compounding" (report, Pew Charitable Trusts, February 2016).

insurers do not typically collect. While the data that APCDs collect can potentially help improve quality and transparency, participation in these programs should not be mandatory.

States received one of three possible scores for this indicator: 1, 3, or 5. States that either have no APCD or allow APCD submission to be voluntary received a score of 5. States for which an APCD is in the process of being implemented but the terms of participation are not yet set received a score of 3. States that mandate participation in an APCD received a score of 1. The data for this indicator come from the All-Payer Claims Database Council (APCDC).[24]

d) State Has Fewer Provider Taxes

States impose varying levels of taxation on healthcare providers, including inpatient hospitals, intermediate care facilities, and nursing homes. Funds from these taxes are often worked back into state Medicaid programs to trigger the release of federal matching funds.[25] In some cases, the tax is partially paid back to providers in the form of increased reimbursement rates. Some states that used to tax providers have repealed these taxes out of concern that they were ineffective and unfair and drove physicians out of state.[26]

States received one of five possible scores for this indicator: 1, 2, 3, 4, or 5. States that have no provider taxes on hospitals, intermediate care facilities, nursing homes, or other providers received a score of 5. States that have one provider tax in those categories received a score of 4. States that have two provider taxes in those categories received a score of 3. States

[24] Stuart I. Silverman et al., *Corporate Practice of Medicine: A Fifty State Survey* (Washington, DC: American Health Lawyers Association, 2014); Michael F. Schaff and Glenn P. Prives, "The Corporate Practice of Medicine Doctrine: Is It Applicable to Your Client?," *Business Law & Governance* 3, no. 2 (2010); Mary H. Michal, Meg S. L. Pekarske, and Matthew K. McManus, "Corporate Practice of Medicine Doctrine 50 State Survey Summary" (Reinhart Boerner Van Deuren s.c., Madison, WI, September 2006).
[25] Wanda Fowler, "Provider Taxes: A Revenue Source for Health Care" (Council of State Governments, June 2010).
[26] David C. Markel, Peter J. Sauer, and Ralph B. Blasier, "Is a Physician 'Provider Tax' the Solution to Michigan's Medicaid Woes?," *HSS Journal: The Musculoskeletal Journal of Hospital for Special Surgery* 9, no. 3 (2013).

that have three provider taxes in those categories received a score of 2. States that have four provider taxes in those categories received a score of 1. The data for this indicator come from the Kaiser Family Foundation.[27]

e) State Allows Entrepreneurial Business Structures

Innovative business models are needed to improve the way healthcare is organized in the United States. Unfortunately, some states limit medical entrepreneurship through laws against what they call the corporate practice of medicine (CPOM). These laws arose out of early-20th-century efforts by the American Medical Association to professionalize medicine through the development of an ethical code preventing quackery and the commercial exploitation of physicians.[28] Proponents insist that any person who practices medicine must be licensed by the government and that healthcare professionals may not assist unlicensed people or entities to practice medicine. In effect, this inhibits the development of new business models that could potentially lower the cost and improve the quality of medical care.[29] For example, these laws can prohibit a licensed physician and an unlicensed person from forming a limited liability company in which the doctor provides medical services and the unlicensed person handles business administration.[30] This indicator measures how much flexibility each state grants healthcare

[27] Kaiser Family Foundation, "States Focus on Quality and Outcomes amid Waiver Changes," accessed March 23, 2020, http://files.kff.org/attachment/Tables-States-Focus-on-Quality-and-Outcomes-Amid-Waiver-Changes-Results-from-a-50-State-Medicaid-Budget-Survey-for-State-Fiscal-Years-2018-and-2019, table 13, "Provider Taxes in Place in All 50 States and DC, FY 2018 and FY 2019."
[28] Nicole Huberfeld, "Be Not Afraid of Change: Time to Eliminate the Corporate Practice of Medicine Doctrine," *Health Matrix* 14, no. 2 (2004): 243.
[29] Huberfeld, "Be Not Afraid of Change," 243; Michal, Pekarske, and McManus, "Corporate Practice of Medicine Doctrine 50 State Survey Summary," 2.
[30] Stuart I. Silverman, "In an Era of Healthcare Delivery Reforms, the Corporate Practice of Medicine Is a Matter That Requires Vigilance," *Health Law and Policy Brief* 9, no. 1 (2015): 3.

entrepreneurs and businesspeople with regard to ownership and business structure in the healthcare sector.

States received one of three possible scores for this indicator: 1, 3, or 5. States that have no prohibition on CPOM received a score of 5. States that have some minor prohibitions on CPOM received a score of 3. States that have a broad prohibition on CPOM received a score of 1. The data for this indicator come from the American Health Lawyers Association.[31]

f) State Does Not Have Mandatory Generic Substitution Laws

Generic substitution occurs when a pharmacist dispenses a cheaper drug that is bioequivalent to, but different from, a more expensive drug that is prescribed by a physician. This possibility arises because once a drug goes off patent, cheaper generic versions of that drug can come onto the market and compete alongside the branded version, but the branded version tends to be better known by name to patients and physicians. In an effort to reduce overall spending on healthcare, some states require pharmacists to substitute generics for branded drugs. But making substitution mandatory overrides patient choice and—since generics are not held liable in the same way that manufacturers of branded drugs are–can leave consumers without recourse if adverse events result from product design defects.

States received one of three possible scores for this indicator: 1, 3, or 5. States that are permissive (i.e., they do not have mandatory generic substitution) received a score of 5. States that mandate substitution for some drugs but have exceptions and exemptions for various situations received a score of 3. States that mandate substitution with few or no exceptions

[31] Silverman, *Corporate Practice of Medicine*; Schaff and Prives, "The Corporate Practice of Medicine Doctrine"; Michal, Pekarske, and McManus, "Corporate Practice of Medicine Doctrine 50 State Survey Summary."

received a score of 1. The data for this indicator come from the National Association of Boards of Pharmacy.[32]

3. Patient Regulation

The Patient Regulation Category analyzes whether (and to what extent) states allow patients to access certain classes of drugs and whether information on drug treatments is freely available. It also analyzes which states allow residents the easiest access to substance-abuse remedies and provide the greatest protection to individuals who offer nonprofessional emergency medical assistance to others.

This category is composed of six indicators:

a) State allows access to CBD oil
b) State allows access to oral contraceptives without physician prescription
c) State has lower excise taxes on e-cigarettes
d) State allows access to naloxone
e) State offers protection for Good Samaritans
f) State has Free Speech In Medicine law

[32] National Association of Boards of Pharmacy, *Survey of Pharmacy Law*, 2019.

Table 4. State Rankings and Scores for the Patient Regulation Category

Rank	Jurisdiction	Score		Rank	Jurisdiction	Score
1	Colorado	4.17		26	Indiana	3.00
1	Hawaii	4.17		26	Virginia	3.00
1	Oregon	4.17		29	Alabama	2.83
4	Utah	4.00		29	Illinois	2.83
5	Maryland	3.67		29	Kentucky	2.83
5	Massachusetts	3.67		29	Louisiana	2.83
5	Michigan	3.67		29	Mississippi	2.83
5	Nevada	3.67		29	Rhode Island	2.83
5	Vermont	3.67		29	South Carolina	2.83
5	District of Columbia	3.67		29	Tennessee	2.83
11	California	3.50		37	Delaware	2.67
11	Maine	3.50		37	New Hampshire	2.67
11	Missouri	3.50		37	New Jersey	2.67
11	New Mexico	3.50		37	Ohio	2.67
11	North Dakota	3.50		37	Pennsylvania	2.67
11	Washington	3.50		37	South Dakota	2.67
11	West Virginia	3.50		43	Alaska	2.50
18	Montana	3.33		43	Connecticut	2.50
18	New York	3.33		43	Florida	2.50
20	Arizona	3.17		43	Iowa	2.50
20	Arkansas	3.17		43	Minnesota	2.50
20	Idaho	3.17		43	Nebraska	2.50
20	Oklahoma	3.17		49	North Carolina	2.33
20	Texas	3.17		50	Kansas	2.17
20	Wisconsin	3.17		50	Wyoming	2.17
26	Georgia	3.00				

Note: Tied ranks reflect tied scores.

a) State Allows Access to CBD Oil

CBD is an oil extracted from cannabis and is closely related to tetrahydrocannabinol (THC). But unlike THC, CBD oil can be used to treat chronic pain without intoxicating the user. Although possession of marijuana is a federal crime, several states have passed laws that allow patients to access CBD oil for medical purposes. Such laws promote freedom in the healthcare market and are thus considered evidence of greater openness and access.

States received one of four possible scores for this indicator: 1, 2, 4, or 5. States that make cannabis and related products fully legal received a score of 5. States that make cannabis

and related products conditionally legal received a score of 4. States that make only CBD products conditionally legal received a score of 2. States that deem all cannabis products illegal received a score of 1. The data for this indicator come from the publication *CBD Oil Review*.[33]

b) State Allows Access to Oral Contraceptives without Physician Prescription

Oral contraceptives are a safe and reliable method for preventing unwanted pregnancy.[34] Using this method of birth control entails obtaining a packet of birth control pills (which usually contain a one-month supply) and taking one pill daily. Some states allow pharmacists to prescribe contraceptives after a brief health screening, whereas other states require a prescription to be filled out by a physician. States with the latter policy in effect put in place an unnecessary access barrier for women.[35]

States received one of two possible scores for this indicator: 1 or 5. States that have enacted laws to enable access to oral contraceptives without a physician prescription received a score of 5. States that have not enacted any such legislation received a score of 1. The data for this indicator come from the National Alliance of State Pharmacy Associations.[36]

[33] CBD Oil Review, "Is CBD Oil Legal in My State?," June 18, 2019, https://cbdoilreview.org/cbd-cannabidiol/is-cbd-oil-legal-in-my-state/.
[34] Jill Jin, "Oral Contraceptives," *JAMA Patient Page*, January 15, 2014, https://jamanetwork.com/journals/jama/fullarticle/1814214
[35] Rebekah Williams, Ashley Meredith, and Mary Ott, "Expanding Adolescent Access to Hormonal Contraception: An Update on Over-the-Counter, Pharmacist Prescribing, and Web-Based Telehealth Approaches," *Current Opinion in Obstetrics and Gynecology* 30, no. 6 (2018): 458–64.
[36] National Alliance of State Pharmacy Associations, "Pharmacist Prescribing: Hormonal Contraceptives," May 24, 2019, https://naspa.us/resource/contraceptives/.

c) State Has Lower Excise Taxes on E-Cigarettes

Electronic cigarettes, which have been growing in popularity since they were introduced to the US market in 2007,[37] are under strict regulatory scrutiny. Public health officials fear e-cigarettes' potential for stimulating nicotine addiction, increasing youth access, and renormalizing smoking. However, multiple clinical studies suggest that e-cigarettes might decrease smoking-related morbidity and mortality.[38] States often use taxation as a means of penalizing use of a particular product deemed unhealthy or undesirable for the public good. Many states have begun to tax e-cigarettes in an attempt to restrict residents' access to them. However, some public health experts have argued that prohibitive e-cigarette laws could be driving people back to using more deadly combustible cigarettes.[39]

States received one of three possible scores for this indicator: 1, 3, or 5. States that did not place an excise tax on e-cigarettes received a score of 5. States with municipal excise taxes received a score of 3. States with a statewide excise tax received a score of 1. The data for this indicator come from the Tax Foundation.[40]

d) State Allows Access to Naloxone

As a result of increasing opioid addiction and overdose, communities and government agencies are actively working to provide liberal access to naloxone, a prescription drug that is safe and

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[37] Marie-Claude Tremblay et al., "Regulation Profiles of e-Cigarettes in the United States: A Critical Review with Qualitative Synthesis" (BMC Medicine, BioMed Central, 2015), 1.
[38] Peter Hajek et al., "Electronic Cigarettes: Review of Use, Content, Safety, Effects on Smokers and Potential for Harm and Benefit," *Addiction* 109, no. 11 (2014).
[39] Amy Fairchild et al., "Evidence, Alarm, and the Debate over E-Cigarettes," *Science* 366, no. 6471 (2019): 1318–20.
[40] Janella Cammenga, "How High are Vapor Excise Taxes in Your State?," Tax Foundation, June 26, 2019, https://taxfoundation.org/state-vapor-taxes-2019/.

can reverse overdose and respiratory depression.[41] Many states restrict residents' access to naloxone by prohibiting over-the-counter sales of the drug.

States received one of five possible scores for this indicator: 1, 2, 3, 4, or 5. States that allow lay distribution of naloxone (e.g., though overdose education programs or homeless shelters) without a prescription received a score of 5. States that allow lay distribution with a prescription received a score of 4.[42] States that allow physician standing orders received a score of 3. States that permitted a third-party prescription (i.e., from a pharmacist) received a score of 2.[43] States with no laws providing ease of access to the drug received a score of 1. The data for this indicator come from the Network for Public Health Law.[44]

e) State Offers Protection for Good Samaritans

A 911 call can mean the difference between life and death for someone experiencing a drug overdose or cardiac arrhythmia. States with Good Samaritan laws encourage bystanders who might otherwise be legally compromised to intervene and attempt to help people experiencing medical emergencies.[45] Good Samaritan laws also protect people who intervene to prevent harm from an opioid overdose from criminal prosecution for possession of drugs or intoxication.

States received one of two possible scores for this indicator: 1 or 5. States whose laws protect people who intervene in an overdose situation received a score of 5. States who have no

[41] Corey Davis, "Naloxone for Community Opioid Overdose Reversal" (Public Health Law Research, Robert Wood Johnson Foundation, June 2015), 2.
[42] "Lay distribution" signifies the presence of a distribution program for friends or family members of someone at risk of overdose.
[43] "Third-party prescription" signifies prescription to a friend or relative of an at-risk individual. A "physician standing order" is an order a physician writes allowing a prescription to be dispensed to a patient he or she has not examined.
[44] Corey Davis, "Legal Interventions to Reduce Overdose Mortality: Naloxone Access and Overdose Good Samaritan Laws," Network for Public Health Law, December 2018.
[45] Eboni Morris, "Liability under 'Good Samaritan' Laws," *AAOS Now* 8, no. 1 (2014): 34.

drug overdose Good Samaritan law received a score of 1. The data for this indicator come from the Foundation for Advancing Alcohol Responsibility.[46]

f) State Has Free Speech In Medicine Law

Obtaining FDA approval for a specific health indication for a particular drug that has already been approved for another purpose can be a lengthy and costly process. Clinical experience and science can be decades ahead in showing that a drug works for different diseases or health issues than those originally approved for by the FDA. This is known as off-label use. The "free speech in medicine" movement at the state level enables a pharmaceutical manufacturer to engage in truthful promotion of off-label use of their drug, biologic drug, or device.

States received one of two possible scores for this indicator: 1 or 5. States that protect truthful off-label drug promotion received a score of 5. States that provide no protection for off-label drug use received a score of 1. The data for this indicator come from the law resource site Lexology.[47]

[46] Foundation for Advancing Alcohol Responsibility, "Good Samaritan State Map," accessed December 2019, https://www.responsibility.org/alcohol-statistics/state-map/issue/good-samaritan/.
[47] Robert A. Paster, "Two Enacted State Laws Permit Truthful Off-Label Promotion," *Lexology*, May 16, 2018.

4. Payment Regulation

The Payment Regulation Category measures the extent to which states liberate or restrict payment arrangements between various actors in the healthcare system. This category includes how much states intervene to determine what kind of insurance coverage individuals can buy, how freely individuals can save for their own future medical expenses, whether pharmaceutical companies can offer coupons to consumers, and more.

This category is composed of nine indicators:

a) State mandates fewer health insurance benefits
b) State does not constrict age rating further than federal law
c) State has fewer health savings account (HSA) taxes
d) State has less medical taxation
e) State does not mandate that individuals buy health insurance
f) State does not restrict short-term renewable health plans
g) State allows drug manufacturer copay coupons
h) State allows insurers in other states to issue health insurance in the state
i) State allows prescription drug reimportation

Table 5. State Rankings and Scores for the Payment Regulation Category

Rank	Jurisdiction	Score		Rank	Jurisdiction	Score
1	Wyoming	4.22		23	Oregon	3.56
2	Georgia	4.11		23	South Dakota	3.56
2	Kentucky	4.11		23	Wisconsin	3.56
4	Montana	4.00		30	Michigan	3.44
5	Alaska	3.89		30	Minnesota	3.44
5	Florida	3.89		30	Missouri	3.44
5	Maine	3.89		30	Nevada	3.44
5	Pennsylvania	3.89		34	Maryland	3.33
9	Mississippi	3.78		34	Tennessee	3.33
9	Nebraska	3.78		36	Arizona	3.22
9	Oklahoma	3.78		36	Connecticut	3.22
9	Texas	3.78		36	Hawaii	3.22
13	Alabama	3.67		36	Illinois	3.22
13	Arkansas	3.67		36	New Hampshire	3.22
13	Colorado	3.67		36	Rhode Island	3.22
13	Idaho	3.67		36	Virginia	3.22
13	Indiana	3.67		36	Washington	3.22
13	Iowa	3.67		36	West Virginia	3.22
13	Kansas	3.67		36	District of Columbia	3.22
13	North Carolina	3.67		46	New Mexico	3.00
13	South Carolina	3.67		47	New York	2.89
13	Utah	3.67		47	Vermont	2.89
23	Delaware	3.56		49	Massachusetts	2.56
23	Louisiana	3.56		50	New Jersey	2.44
23	North Dakota	3.56		51	California	1.78
23	Ohio	3.56				

Note: Tied ranks reflect tied scores.

a) State Mandates Fewer Health Insurance Benefits

Insurers have varying amounts of leeway in determining the structure and pricing of the health insurance policies they sell. Some states require insurance companies to include certain benefits in health insurance policies sold in the state. (These are requirements over and above federally mandated health benefits, which are required in all states.) Some researchers have estimated that mandated benefits can increase the cost of basic health insurance by an amount between 20

percent and 50 percent.[48] Others have noted that the cost increase is likely smaller because many people receive coverage through their employers, and employers likely would have elected to include most mandated benefits anyway. But these researchers still find that mandated benefits have a negative effect on openness, access, and consumer choice.[49] We believe that such mandates lead to a less than optimal result.

States received one of five possible scores for this indicator: 1, 2, 3, 4, or 5. States with zero mandates received the highest possible score of 5 for this indicator. States with 1 to 14 mandates received a score of 4; states with 15 to 29 mandates received a score of 3; states with 30 to 44 mandates received a score of 2; and states with 45 or more mandates received a score of 1. The data for this indicator come from the Centers for Medicare and Medicaid Services.[50]

b) State Does Not Constrict Age Rating Further Than Federal Law

Age rating is a type of "community rating" in insurance pricing that limits the extent to which prices can differ based on the age of the covered individual. According to federal law, despite the importance of accurate risk assessment, insurers may not sell coverage to people at different prices based on their actual health-related behaviors and other relevant characteristics. Under statute, insurers are only allowed to take into consideration a limited number of factors when pricing coverage for an individual.[51] These include the person's age, whether the person smokes, and where the person lives. Premiums may be higher for certain individuals only by certain

[48] Victoria Craig Bunce and JP Wieske, *Health Insurance Mandates in the States 2009* (Alexandria, VA: Council for Affordable Health Insurance, 2009).
[49] Jonathan Gruber, "State-Mandated Benefits and Employer-Provided Health Insurance," *Journal of Public Economics* 55, no. 3 (1994).
[50] Centers for Medicare and Medicaid Services, "Information on Essential Health Benefits (EHB) Benchmark Plans," July 2017, https://www.cms.gov/cciio/resources/data-resources/ehb.
[51] Mathias Kifmann, "Community Rating in Health Insurance and Different Benefit Packages," *Journal of Health Economics* 21, no. 5 (2002).

ratios, such as 3 to 1 for older adults compared to younger adults. States that impose no more restrictions than the applicable federal law does are leaving their insurers as free as they can in this regard, so they score the highest in these areas. Other states go beyond the federally defined ratios and impose narrower ranges that, in effect, intensify the community rating effect. These states score lower.

States received one of three possible scores for this indicator: 1, 3, or 5. States that allow age rating at the maximum level the federal government allows received a score of 5. States that allow some age rating, but with more restrictions than the federal government imposes, received a 3. States that prohibit age rating altogether received a 1. The data used for this indicator come from the Centers for Medicare and Medicaid Services.[52]

c) State Has Fewer Health Savings Account (HSA) Taxes

Health savings accounts (HSAs) are special accounts individuals can use to save money for medical expenses. Paired with a high-deductible health insurance policy, an HSA can be an important piece of responsible planning for healthcare expenses. HSAs form part of the foundation of the consumer-directed healthcare movement, as they "shift the locus of rights and responsibilities for financing healthcare from governments and employers toward consumers."[53] With an HSA, individuals can save during their healthy years for unpredictable medical expenses in later years. HSAs are undercut, however, when their tax-advantaged nature is either revoked or never granted in the first place. States impose varying levels of regulation and taxation on these financial tools.

[52] Centers for Medicare and Medicaid Services, "Market Rating Reforms," June 2017, https://www.cms.gov/CCIIO/Programs-and-Initiatives/Health-Insurance-Market-Reforms/state-rating.
[53] James C. Robinson, "Health Savings Accounts—the Ownership Society in Health Care," *New England Journal of Medicine* 353, no. 12 (2005).

States received one of two possible scores for this indicator: 1 or 5. States that do not tax HSAs received a score of 5. States that tax either HSA contributions or HSA earnings received a score of 1. The data for this indicator come from the organization HSA for America.[54]

d) State Has Less Medical Taxation

States impose varying levels of taxation on medical devices, medical services, and medicines. In several states, all three of those categories are tax exempt, whereas in at least one state, sales taxes are applied to items in all three of those categories. Some states have a sales tax for a general category but exempt certain items, such as specific medical devices if the consumer has a prescription for the device. These exemptions can be broad or narrow (e.g., limited to just certain classes of items, such as ostomic items, prosthetics, and oxygen components and systems).

States received one of four possible scores for this indicator: 1, 2, 3, or 5. States that tax none of the three main categories of interest (medical devices, medical services, and medicines) received a score of 5. States that tax one of those three categories received a score of 3. States that tax two of those three categories received a score of 2. States that tax all three of those categories received a score of 1. The data for this indicator come from the website Sales Tax Handbook.[55]

e) State Does Not Mandate That Individuals Buy Health Insurance

Insurance is the financial mechanism by which individuals pool risk in order to protect themselves against the costs associated with uncertainties. A well-functioning insurance market

[54] HSA for America, "State Income Tax Information on Health Savings Account," accessed December 13, 2019, https://www.healthshare.hsaforamerica.com/state-income-tax/.
[55] Sales Tax Handbook home page, accessed December 5, 2019, https://www.salestaxhandbook.com/.

allows people to go about their lives, with mitigated risk, at a relatively small cost per person. Insurance can work well when the potential loss is not infinitely large, immeasurable, or certain to happen. Unfortunately, state laws often prevent health insurance from working the way that other types of insurance work. These laws can drive the cost of insurance up to the point where a rational person might prefer not to buy health insurance at all. This is most likely to be true for relatively young and healthy people who do not anticipate having to spend very much on healthcare in the course of a given year. When the healthiest people withdraw from communally priced insurance pools, the per-person cost for the people who remain rises. Some states respond to individuals' choices to forgo overpriced insurance by forcing them to either buy insurance or pay a penalty or tax.

States received one of two possible scores for this indicator: 1 or 5. States that do not mandate that individuals buy health insurance received a score of 5. States that do mandate that individuals buy health insurance received a score of 1. The data for this indicator come from an issue brief published by the Kaiser Family Foundation.[56]

f) State Does Not Restrict Short-Term Renewable Health Plans

Short-term renewable health insurance is insurance that is sold to individuals for up to one year and is sometimes renewable for multiple years. It exists as an alternative to the traditional employer-sponsored insurance system for individuals who find that they want or need coverage on a more temporary basis—for instance if they are between jobs or have for some reason lost their regular insurance. Short-term renewable health insurance is a special category of insurance because these policies are exempt from federal health insurance regulations. This special status

[56] Jennifer Tolbert et al., "State Actions to Improve the Affordability of Health Insurance in the Individual Market," Kaiser Family Foundation, July 17, 2019.

can be attractive for some consumers, as policies in this category can be 50 to 70 percent cheaper.[57] States, however, can impose limitations and restrictions on how long these policies can remain valid and whether they can be renewable.

States received one of five possible scores for this indicator: 1, 2, 3, 4, or 5. States that allow short-term renewable plans to be sold up to the federally defined maximum extent (a 364-day plan with the option to be renewed twice) received a score of 5. States that allow plans to be sold up to about one full year in duration received a score of 4. States that allow plans to be sold up to about six months in duration received a score of 3. States that allow plans to be sold up to about three months in duration received a score of 2. States that do not allow short-term plans to be sold, or that have such restrictive regulations that no plans choose to do business there, received a 1. The data for this indicator come from the website HealthInsurance.org.[58]

g) State Allows Drug Manufacturer Copay Coupons

Manufacturer copay coupons (also known as manufacturer copay cards) are savings programs that are set up and run by drug manufacturers to help patients afford medications. Copay coupons are generally offered for brand-name drugs, not generics. Using the coupon lowers the out-of-pocket cost for patients, enabling patients to stick with the brand-name drug that they may already know and like. (Due to anti-kickback statutes, most copay coupons can only be used by individuals with private insurance, not individuals with Medicare or Medicaid.[59]) Some states have passed laws against copay coupons because they argue that coupons allow drug companies

[57] Michael F. Cannon, "A Victory for Consumer Protections and Health Insurance Freedom," *Cato at Liberty*, July 21, 2019.
[58] Louise Norris, "Is Short-Term Health Insurance Right for You?," HealthInsurance.org, accessed December 10, 2019, https://www.healthinsurance.org/short-term-health-insurance/.
[59] Lauren Chase, "What Are Manufacturer Copay Cards?," GoodRx, September 16, 2019, https://www.goodrx.com/blog/what-are-manufacturer-copay-cards/.

to keep the out-of-pocket costs to patients low while they raise the list prices that they charge insurers, thus increasing overall healthcare spending (via higher premiums).[60] As researchers studying the overall incentive picture, we recognize the possible short-term effects of these tactics but caution states against taking up the potentially legally perilous position of prohibiting companies from giving discounts on their own products. We would prefer pricing discipline on drug makers to be brought about more organically through competition.

States received one of two possible scores for this indicator: 1 or 5. States that allow copay coupons for prescription drugs received a score of 5. States that do not allow copay coupons for prescription drugs received a score of 1. The data used for this indicator come from an article published in *Managed Care*.[61]

h) State Allows Insurers in Other States to Issue Health Insurance in the State

The market for private health insurance in the United States is largely compartmentalized by state. Each state regulates health insurance differently, and many states do not allow health insurance companies from other states to sell policies in their state. Opponents of allowing health insurance to be sold across state lines argue that companies would relocate to states with the most favorable regulatory environments and start selling "low quality" plans that offer only catastrophic coverage.[62] Proponents point to the potential for improved consumer choice, stronger competition, and lower prices.

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[60] Leemore S. Dafny et al., "Undermining Value-Based Purchasing—Lessons from the Pharmaceutical Industry," *New England Journal of Medicine*, November 24, 2016.
[61] John S. Linehan, "State Legislatures Spring Ahead with Restrictions on Drug Copay Accumulators," *Managed Care*, April 16, 2019.
[62] The Commonwealth Fund, "Essential Facts about Health Reform Alternatives: Allowing Insurance Sales across State Lines," April 5, 2017, https://www.commonwealthfund.org/publications/explainer/2017/apr/essential-facts-about-health-reform-alternatives-allowing-insurance.

States received one of two possible scores for this indicator: 1 or 5. States that allow insurers to sell policies across state lines received a score of 5. States that do not allow insurers to sell policies across state lines received a score of 1. The data for this indicator come from the National Conference of State Legislatures.[63]

i) State Allows Prescription Drug Reimportation

Rising spending on prescription drugs in the United States, combined with the fact that many pharmaceutical companies sell their drugs beyond the US border at steep discounts (market segmentation), has created a debate over the practice of reimportation. Prescription drug reimportation is the practice of importing drugs that were originally manufactured in the United States back into the country for sale in the US market. Proponents view it as a fair, if roundabout, market practice, while opponents argue that bypassing drug tracking systems could lead to potential safety issues or threaten manufacturer profitability and therefore innovation. Reimportation, if it should be limited at all (for instance, through no-resale agreements), is a matter for manufacturers and foreign purchasers to arrange and police.[64] It is not appropriate for either the US federal government or states to ban reimportation.

States received one of three possible scores for this indicator: 1, 3, or 5. States that allow patients to obtain prescription drugs through reimportation received a score of 5. States that have implemented, or are in the process of implementing, a state prescription drug reimportation

[63] Richard Cauchi, "Allowing Purchases of Out-of-State Health Insurance," National Conference of State Legislatures, August 1, 2018, https://www.ncsl.org/research/health/out-of-state-health-insurance-purchases.aspx.
[64] Roger Pilon, "Legalizing Prescription Drug Importation," Cato Institute, January 26, 2005.

program received a score of 3. States that do not allow prescription drug reimportation in any form received a 1. The data for this indicator come from the STAT news and data service.[65]

5. Delivery Regulation

The Delivery Regulation Category assesses how conducive each state's environment is to the establishment of new and diverse models of healthcare delivery. These can include new technological paradigms (e.g., telemedicine) or new service arrangements (e.g., direct primary care, or DPC). Both of these have the potential to make healthcare more open and accessible.

This category is composed of ten indicators:

a) State reimburses Medicaid providers at parity for store-and-forward telemedicine
b) State reimburses Medicaid providers at parity for remote monitoring
c) State allows broad Medicaid reimbursement by provider type
d) State has less restrictive telepresenter requirements
e) State has less restrictive telepharmacy location laws
f) State allows online prescribing
g) State allows online eye exams
h) State does not treat DPC as insurance
i) State allows DPC drug dispensing
j) State allows DPC wholesale lab pricing

[65] Adam J. Fein and Dirk Rodgers, "State Drug Importation Laws Undermine the Process that Keeps Our Supply Chain Safe," *STAT*, July 11, 2019.

Table 6. State Rankings and Scores for the Delivery Regulation Category

Rank	Jurisdiction	Score		Rank	Jurisdiction	Score
1	Arizona	4.50		26	Mississippi	3.60
1	Washington	4.50		26	Montana	3.60
3	Minnesota	4.30		26	Oklahoma	3.60
4	Alaska	4.20		26	Texas	3.60
4	Illinois	4.20		26	West Virginia	3.60
4	Nebraska	4.20		26	Wisconsin	3.60
4	Virginia	4.20		26	District of Columbia	3.60
8	Louisiana	4.10		34	Arkansas	3.50
8	Oregon	4.10		34	Florida	3.50
8	Utah	4.10		34	Michigan	3.50
11	Colorado	4.00		34	Wyoming	3.50
11	Hawaii	4.00		38	Georgia	3.40
11	South Dakota	4.00		38	Kentucky	3.40
14	Idaho	3.90		38	North Carolina	3.40
14	Indiana	3.90		38	Pennsylvania	3.40
14	Kansas	3.90		38	Rhode Island	3.40
14	Maine	3.90		43	Alabama	3.30
14	Missouri	3.90		43	Delaware	3.30
14	Nevada	3.90		43	Iowa	3.30
14	New Mexico	3.90		46	New Hampshire	3.20
21	Connecticut	3.80		46	Ohio	3.20
21	Vermont	3.80		46	South Carolina	3.20
23	Maryland	3.70		49	New Jersey	3.10
23	North Dakota	3.70		49	New York	3.10
23	Tennessee	3.70		51	Massachusetts	3.00
26	California	3.60				

Note: Tied ranks reflect tied scores.

a) State Reimburses Medicaid Providers at Parity for Store-And-Forward Telemedicine

Telemedicine is commonly defined as the use of telecommunications technology for the remote diagnosis and treatment of patients.[66] Increasingly, practitioners are finding that telemedicine can be used to supplement or substitute for face-to-face contact between patients and providers, and that care delivered via telecommunications technology often can be of the same quality as care delivered in the traditional way.[67] Many observers believe that increased use of telemedicine

[66] Sanjay Sood et al., "What Is Telemedicine? A Collection of 104 Peer-Reviewed Perspectives and Theoretical Underpinnings," *Telemedicine and e-Health* 13, no. 5 (2007).
[67] Rashid L. Bashshur, "On the Definition and Evaluation of Telemedicine," *Telemedicine Journal* 1, no. 1 (2009).

could also lower healthcare system costs while improving healthcare accessibility for many patient populations.

Store-and-forward telemedicine refers specifically to a form of telemedicine in which images, video, or data are captured on the patient side and then uploaded to a server for later evaluation. Dermatology is one area in which store-and-forward telemedicine (e.g., for reviewing rashes, skin conditions, and wounds) can be appropriate and efficient. Whereas in private insurance the policy of whether store-and-forward telemedicine is reimbursed should be left to insurers and physicians to decide, in public programs such as Medicaid there is a public interest in ensuring that care can be delivered as efficiently as possible.

States received one of three possible scores for this indicator: 1, 3, or 5. States that reimburse Medicaid providers at parity for store-and-forward telemedicine received a score of 5. States that reimburse at parity but with limitations received a score of 3. States that do not reimburse for this service received a 1. The data for this indicator come from the Center for Connected Health Policy.[68]

b) State Reimburses Medicaid Providers at Parity for Remote Monitoring

Remote patient monitoring (RPM) is a type of telemedicine in which devices collect patient information such as vital signs, blood oxygen levels, heart rate, and blood sugar levels and relay this information (usually in real time or near-real time) to monitoring centers. Clinicians working at monitoring centers can intervene or call for help if the data indicate that a patient is in various levels of distress. States have a varying amount of openness to Medicaid reimbursement for remote monitoring. Some states limit reimbursement to the treatment of certain conditions.

[68] Center for Connected Health Policy, *State Telehealth Laws and Reimbursement Policies*, spring 2019.

Others limit reimbursement only to certain technologies. For this indicator, states with fewer restrictions received higher scores.

States received one of three possible scores for this indicator: 1, 3, or 5. States that reimburse for RPM in their Medicaid program for essentially all relevant services received a score of 5. States that reimburse for RPM for some (but not all) relevant services received a score of 3. States that do not reimburse for RPM received a score of 1. The data for this indicator come from the Center for Connected Health Policy.[69]

c) State Allows Broad Medicaid Reimbursement by Provider Type

Telemedicine has been shown to be beneficial across a wide variety of specialties and clinical areas, including psychiatry, chronic disease management, and nutrition coaching, to name just a few.[70] Unfortunately, one way that states restrict the use of telemedicine in their Medicaid programs is by allowing only certain types of providers to be reimbursed for using telemedicine to provide otherwise reimbursable services. As researchers concerned with incentives, we argue that if a technology is likely to be effective, as telemedicine has been shown to be, physicians in a publicly funded program such as Medicaid should be reimbursed for care delivered using it. This indicator evaluates the extent to which states reimburse for teleservices provided by various types of healthcare professionals (i.e., providers).

States received one of four possible scores for this indicator: 1, 3, 4, or 5. States that reimburse essentially all recognized provider types in their Medicaid program received a score of

[69] Center for Connected Health Policy, *State Telehealth Laws and Reimbursement Policies*.
[70] Ines Hungerbuehler et al., "Home-Based Psychiatric Outpatient Care through Videoconferencing for Depression: A Randomized Controlled Follow-Up Trial," *JMIR Mental Health* 3, no. 3 (2016); Beate-Christin Hope Kolltveit et al., "Telemedicine in Diabetes Foot Care Delivery: Health Care Professionals' Experience" (BMC Health Services Research, BioMed Central, 2016); Stefano Omboni, Marina Caserini, and Claudio Coronetti, "Telemedicine and M-Health in Hypertension Management: Technologies, Applications and Clinical Evidence," *High Blood Pressure & Cardiovascular Prevention* 23, no. 3 (2016).

5. States that reimburse six or more provider types received a score of 4. States that reimburse between one and five provider types received a score of 3. States that reimburse only physicians received a score of 1. The data for this indicator come from the American Telemedicine Association.[71]

d) State Has Less Restrictive Telepresenter Requirements

A telepresenter is a special assistant that takes part in telemedicine encounters in order to make those encounters eligible for Medicaid reimbursement. States have different requirements regarding the need for, and use of, telepresenters. We believe that while it can be desirable and even necessary to have such assistance in some cases, the decision whether to use a telepresenter should be left to the physician and patient.

States received one of four possible scores for this indicator: 1, 2, 3, or 5. States that do not require a telepresenter received a score of 5. States that require a telepresenter for some teleservices received a 3. States that require a telepresenter for many or all teleservices received a 2. States for whom the telepresenter question is moot because state Medicaid offers no reimbursement at all received a 1. The data used for this indicator come from the American Telemedicine Association.[72]

e) State Has Less Restrictive Telepharmacy Location Laws

Telepharmacy is the use of telecommunications technology to deliver pharmaceutical care and pharmacy services at a distance. Telepharmacy can benefit patients in many different settings, but it can be especially beneficial for rural patients. As the number of independently owned rural

[71] Center for Connected Health Policy, *State Telehealth Laws and Reimbursement Policies*.
[72] American Telemedicine Association, *2019 Update of State-by-State Telehealth Report Cards*, July 19, 2019.

pharmacies falls, enabling a pharmacist to support clinical services, provide patient education, provide medication reconciliation, or provide other services at a distance can be an efficient way to deliver high-quality care.[73] Some states, however, place geographic limitations on telepharmacy, preventing it from coexisting and competing with traditional pharmacies.

States received one of four possible scores for this indicator: 1, 2, 3, and 5. States that allow telepharmacy without geographic restrictions received a score of 5. States that allow telepharmacy with some geographic restrictions received a score of 3. States that do not allow telepharmacy but have a pilot program or waiver in place that could potentially lead to telepharmacy received a score of 2. States that do not allow telepharmacy at all received a score of 1. The data for this indicator come from an article by Tzanetakos et al., published in the *American Journal of Medical Research*.[74]

f) State Allows Online Prescribing

Online prescribing occurs when a physician prescribes a drug to a patient on the basis of an online visit, encounter, or interaction. (This is not to be confused with e-prescribing, which is merely the electronic transmission of prescriptions from a physician to a pharmacist, for instance through an electronic health record system.) To protect against misuse or abuse, all states require that physicians and patients must establish a relationship before the physician may write a prescription; however, states vary in what they require and whether they allow the relationship to be established using telemedicine. Some states do not allow online prescribing at all. We argue

[73] George Tzanetakos, Fred Ullrich, and Keith Mueller, "Telepharmacy Rules and Statutes: A 50-State Survey," *American Journal of Medical Research* 5, no. 2 (2018): 7–23; Simone Baldoni, Francesco Amenta, and Giovanna Ricci, "Telepharmacy Services: Present Status and Future Perspectives: A Review," *Medicina* 55 (2019): 327.
[74] Tzanetakos, Ullrich, and Mueller, "Telepharmacy Rules and Statutes."

that having fewer limitations on online prescribing is best for maximizing convenience and patient autonomy.

States received one of three possible scores for this indicator: 1, 3, or 5. States that allow online prescribing with minimal or no special requirements received a score of 5. States that allow online prescribing but with some limitations received a score of 3. States that do not allow online prescribing received a score of 1. The data for this indicator come from the Center for Connected Health Policy.[75]

g) State Allows Online Eye Exams

People who wear glasses and contact lenses are used to having their vision tested from time to time to determine whether they need to change the prescription of their corrective lenses. Until recently, these examinations could only be done in person, but now with the help of innovative mobile apps it is possible to conduct a suitable examination online. For some individuals, the convenience and cost savings make an online refractive eye exam an attractive proposition. Other individuals prefer (or need) a more comprehensive in-person visit to screen for conditions such as cataracts and glaucoma. To date, the FDA has been the primary intervener in this space, preventing online eye exam providers from advertising their app-based service as a diagnosis-making medical device, but states have started to become involved too, with multiple states either prohibiting or restricting online eye exams.

States received one of three possible scores for this indicator: 1, 3, or 5. States that allow online eye exams received a score of 5. States that allow online exams but with restrictions or

[75] Center for Connected Health Policy, *State Telehealth Laws and Medicaid Program Policies*, spring 2019.

limitations received a score of 3. States that do not allow online eye exams received a score of 1. The data for this indicator come from the American Academy of Ophthalmology.[76]

h) State Does Not Treat DPC as Insurance

Direct primary care (DPC) is a model of healthcare provision in which a primary care doctor charges patients a retainer fee covering all or most primary care services, including clinical, laboratory, and consulting services. This model enables physicians to move away from fee-for-service insurance billing. Given the variety of retainer practice models and the resulting legislative confusion, it is important to define DPC accurately. A DPC practice charges a periodic fee for services, generally $50 to $85 per month.[77] It does not bill any third parties on a fee-for-service basis, and any per-visit charges are less than the monthly equivalent of the periodic fee.[78] Through this mechanism, DPC practices claim to reduce administrative overhead by approximately 40 percent.[79] Additionally, DPC practitioners have the flexibility to use email and telemedicine to interact with patients, which is a benefit of the model because these methods of providing care are not typically compensated by insurance companies.[80] Despite the clear benefits, opponents of DPC charge that the model violates insurance regulations. Some states have responded, clarifying that DPC should not be subjected to insurance regulations.

States received one of four possible scores for this indicator: 1, 3, 4, or 5. States with laws protecting DPC received a score of 5, states with defined DPC guidance or protection from the insurance commission received a score of 4. States with no available or relevant DPC

[76] Stephen Barlas, "Vision Correction Goes Online," American Academy of Ophthalmology, August 2017.
[77] Charlotte Huff, "Direct Primary Care: Concierge Care for the Masses," *Health Affairs* 34, no. 12 (2015): 2016.
[78] Philip M. Eskew and Kathleen Klink, "Direct Primary Care: Practice Distribution and Cost across the Nation," *Journal of the American Board of Family Medicine* 28, no. 6 (2015): 793.
[79] Eskew and Klink, "Direct Primary Care," 794.
[80] Bill Kramer, "Direct Primary Care: The Future of Health Care?," *MultiState Insider*, April 1, 2015.

guidance at present, or those with proposed legislation pending, received a score of 3. States with a hostile DPC regulatory environment received a score of 1. (Unfortunately, there is no clear or reproducible way to determine which states have aggressive insurance commissioners actively pursuing or shutting down DPC practices—the only way to obtain this information is to interview staff at each commissioner's office.) The data for this indicator come from the organization Direct Primary Care Frontier.[81]

i) State Allows DPC Drug Dispensing

DPC drug dispensing is the ability for a DPC provider to dispense medications on-site at his or her clinic. This is a key benefit of the practice model. By the time a drug is sold at a retail pharmacy, the cost of a medication may have increased by up to 200 percent.[82] DPC providers can provide the medication at near-wholesale prices, passing on the cost savings to their patients. Patients also receive the convenience of purchasing the medication at the same location as their healthcare appointment. However, physician drug dispensing is regulated at the state level and may not be accessible depending on the state where the DPC practice is located.

States received one of five possible scores for this indicator: 1, 2, 3, 4, or 5. States that permitted drug dispensing at DPC practices without a registration requirement received a score of 5. States that permitted drug dispensing but with some requirements received a score of 4. States with no available or relevant DPC guidance received a score of 3. States limiting the drug formulary or dictating "workplace on-site only" dispensing received a score of 2. States that

[81] DPC Frontier, "2019 DPC Laws + Pilots," accessed December 2019, https://www.dpcfrontier.com/states/.
[82] Joey Mattingly, "Understanding Drug Pricing," *U.S. Pharmacist*, June 20, 2012.

prohibit DPC drug dispensing received a score of 1. The data for this indicator come from the organization Direct Primary Care Frontier.[83]

j) State Allows DPC Wholesale Lab Pricing

DPC wholesale lab pricing is the ability of a DPC practice to negotiate low rates with national laboratories and pass the savings on to their patients. As a supposed anti-markup consumer protection measure, some states require that laboratories bill patients or insurers directly, meaning that the DPC practice cannot be the entity that purchases the laboratory work. This has the unintended effect of preventing DPC practices from getting a wholesale price on labs for their patients.

States received one of two possible scores for this indicator: 1 or 5. States that permit DPC direct billing to patients for nonpathology laboratory services received a score of 5. States that do not permit direct billing received a score of 1.[84] The data for this indicator come from the organization Direct Primary Care Frontier.[85]

[83] DPC Frontier, "Physician Dispensing State by State Comparison," accessed December 2019, https://www.dpcfrontier.com/dispensing-medications/.
[84] DPC Frontier, "Laboratory Client Billing Regulations," accessed December 2019, https://www.dpcfrontier.com/laboratory-client-billing/.
[85] DPC Frontier, "Physician Dispensing State by State Comparison."

Watchlist

a) State Allows Access To Medical Marijuana

Use of CBD oil is less controversial than use of medical marijuana, which can intoxicate those using the drug. Several studies have linked marijuana to an increased risk for psychiatric disorders. A recent study in *Lancet Psychiatry* shows that using marijuana on a daily basis increases the odds of having a psychotic episode.[86] Although multiple states have legalized marijuana use, giving the drug a benign aura, medical science provides strong controverting evidence. For this reason, the authors choose not to strongly endorse the legalized use of medical marijuana by making it one of the 41 indicators.

b) State Protects Individuals against Surprise Billing

Medical bills for costly out-of-network care can be financially devastating to patients. This cost is particularly resented when patients unknowingly receive care from a provider or facility that is not covered by their insurance network, such as during a medical emergency or inpatient hospital care with specialty consultants. Several states have sought to protect the patient by legislation targeting surprise billing.[87] However, surprise-billing legislation can potentially decrease access to care by enabling insurers to shrink physician networks and reduce physician bargaining power for compensation, thereby further stimulating provider practice consolidation.[88] Because the

[86] Marta Di Forti et al., "The Contribution of Cannabis Use to Variation in the Incidence of Psychotic Disorder across Europe (EU-GEI): A Multicentre Case-Control Study," *Lancet Psychiatry* 6, no. 5 (2019): 427–36.
[87] National Academy for State Health Policy, "State Legislators Take Action to Protect Consumers from Surprise Billing," September 18, 2018.
[88] Michelle Andrews, "California's Surprise-Billing Law Protects Patients but Aggravates Many Doctors," *MedCity News*, December 5, 2019.

ramifications of these laws to the healthcare system overall are still unclear, the authors have chosen not to strongly endorse patient protection against surprise billing.

c) State Protects Patient Ownership of Health Record

On initial evaluation, patients' ownership of their own health records appears uncontroversial. The health record is data collected from the patient and should therefore be immediately accessible to and under the control of the patient. However, creation of a health record is a joint effort among multiple caregivers and healthcare facilities in addition to the patient. With the advent of electronic records, data sharing has exponentially increased, improving patient care overall. The primacy of patient interests is assumed in current law. Yet when the legal mandates of property ownership are applied to information, effective care and management of the patient can be stifled by inhibiting the flow of information. According to a 2015 state comparison study by the Milken Institute School of Public Health, only New Hampshire has a law stating that patients own their medical records, while in 21 other states, providers own them, and the remaining states have no legislation on the issue.[89] Given the inherent legal difficulties in owning information, the authors have placed this issue on the watchlist and have chosen not to strongly endorse patient ownership of health records.

d) State Does Not Institute Price Controls on Drugs

The rising cost of pharmaceuticals is a major concern in healthcare. It is not rare for the cost of some advanced therapies (e.g., Myalept, Ravicti, and Daraprim) to now reach into the tens of

[89] Health Information and the Law Project, Milken Institute School of Public Health, "Who Owns Medical Records: 50 State Comparison," August 20, 2015, http://www.healthinfolaw.org/comparative-analysis/who-owns-medical-records-50-state-comparison.

thousands of dollars per month.[90] Meanwhile, other drugs cost far less but can undergo sudden and sometimes unexplained price increases. Both of these things can put patients in very difficult situations. In response to high prices and sudden price increases, some state policymakers have enacted various forms of price controls on drugs. Economic theory on (and practical experience with) price controls cause us to be skeptical of such interventions, but creating a well-formed indicator and measurement method for this issue would be challenging given the current wide variation in approaches that have been taken (which include price caps, price increase reviews, limits on increases, requirements upon pharmacy benefit managers to negotiate and pass savings on to patients, and numerous other actions). Until the picture of state-based drug price controls becomes either clearer or more uniform, this issue will remain on the watchlist.

e) State Law Supports Freestanding Birth Centers

Freestanding birth centers serve as an alternative to the expensive, highly interventional hospital-based maternity care system for low-risk, healthy mothers. The cost of delivering at a freestanding birth center is roughly half that of an uncomplicated hospital birth.[91] However, safety concerns place this proposed indicator on the watch list. Most US birth centers are privately owned without a standard protocol to identify those women who require a higher level of care. Nor is there a standard protocol for when to transfer the mother to a hospital. Time and distance barriers from an operating room and blood bank can lead to morbidity and mortality of woman and baby. More work on integrating freestanding birth centers with hospital care needs to be done before the authors can strongly endorse these birth centers.

[90] Tori Marsh, "The 20 Most Expensive Prescription Drugs in the U.S.A.," *GoodRx*, February 13, 2020.
[91] Embry Howell et al., "Potential Medicaid Cost Savings from Maternity Care Based at a Freestanding Birth Center," *Medicare & Medicaid Research Review* 4, no. 3 (2014).

f) State Allows Freestanding Emergency Rooms

Emergency departments have traditionally been located within hospitals, giving emergency physicians the ability to directly admit patients into the hospital if their medical condition is serious enough. With 24/7 access, emergency departments are the safety net of the community. However, many hospitals in high-need areas are overwhelmed with large patient volumes, resulting in crowded emergency departments; prolonged waiting times; aging, poorly maintained facilities; and stressed, overextended healthcare providers. Entrepreneurs, seeing opportunity in the healthcare market for convenient and attractive emergency care, started building freestanding emergency departments separate from hospital facilities. The argument has been made that such freestanding emergency departments provide a much better patient experience with 24/7 access, immediate care, and a comfortable, clean environment. But many states, such as California, will not allow freestanding emergency departments because they are believed to drive up the cost of healthcare. The authors choose not to strongly endorse freestanding emergency departments because there is no cost savings compared to traditional emergency departments, and the acuteness of the patient population managed is similar to that of the much less expensive urgent care center.[92]

g) State Does Not Require Occupational Licensing for Music Therapists

Historically, the argument for occupational licensing—especially in medicine—has been that it protects the public from harm caused by "incompetents, charlatans, and quacks."[93] Although licensing may accomplish that goal on some level, it can also restrict entry to professions,

[92] Carolyn Y. Johnson, "Free-Standing ERs Offer Care without the Wait. But Patients Can Still Pay $6,800 to Treat a Cut," *Washington Post*, May 7, 2017.
[93] S. David Young, "Occupational Licensing," in *The Concise Encyclopedia of Economics*, ed. David R. Henderson (online: Library of Economics and Liberty, 1993).

protecting providers against competition from newcomers.[94] Wherever entry into an occupation can be slowed or the scope of practice for a profession limited, interest groups take notice and seek control over the requirements-setting process.[95] The case for licensing is weakest in professions where the risk of harm is least. We suspect that music therapy—a legitimate profession, to be sure—is a prime example of a profession that presents a low risk of harm and thus should not be subject to state licensing.[96] We are actively observing the music therapy space and are considering including this as an indicator in future editions of this project.

[94] Young, "Occupational Licensing."
[95] Elizabeth Graddy, "Toward a General Theory of Occupational Regulation," *Social Science Quarterly* 72, no. 4 (1991); Norman Gevitz, "'A Coarse Sieve': Basic Science Boards and Medical Licensure in the United States," *Journal of the History of Medicine and Allied Sciences* 43, no. 1 (1988); Keith B. Leffler, "Physician Licensure: Competition and Monopoly in American Medicine," *Journal of Law & Economics* 21, no. 1 (1978); Milton Friedman, *Capitalism and Freedom*, 40th anniversary ed. (Chicago: University of Chicago Press, 2002).
[96] Robert Graboyes and Jared Rhoads, "For Patients and Therapists—Please Don't Stop the Music," *Inside Sources*, February 12, 2020.

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