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Certificate-of-Need Laws: Are They Achieving Their Goals?

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MORE THAN FOUR DECADES AGO, CONGRESS

passed and President Ford signed the National Health Planning and Resources Development Act of 1974.¹ The act withheld federal funds from states that failed to adopt certificate-of-need (CON) laws regulating healthcare facilities. CON laws require healthcare providers wishing to open or expand a healthcare facility to first prove to a regulatory body that the community needs the planned services. New York had enacted the first CON program in 1964, a full decade before the federal government began encouraging other states to follow suit, and by the early 1980s every state except Louisiana had implemented some version of a CON program.² Policymakers hoped these programs would restrain healthcare costs, increase healthcare quality, and improve access to care for poor and underserved communities.

In 1986—as evidence mounted that CON laws were failing to achieve their stated goals—Congress repealed the federal act, eliminating federal incentives for states to maintain their CON programs.³ Since then, 15 states have done away with their CON regulations.⁴ A majority of states still maintain CON programs, however, and vestiges of the National Health Planning and Resources Development Act can be seen in the justifications that state legislatures offer in support of these regulations. Policymakers claim CON regulation is intended to⁵

- 1) ensure an adequate supply of healthcare resources,
- 2) ensure access to health care for rural communities,
- 3) promote high-quality health care,
- 4) ensure charity care for those unable to pay or for otherwise underserved communities,

- 5) encourage appropriate levels of hospital substitutes and healthcare alternatives, and
- 6) restrain the cost of healthcare services.

Research, however, shows that CON laws fail to achieve these laudable goals. In fact, by limiting supply and undermining competition, CON laws may undercut each of these aims.

1. DO CON PROGRAMS ENSURE AN ADEQUATE SUPPLY OF HEALTHCARE RESOURCES?

CON programs limit the introduction and expansion of a wide variety of medical services and equipment, such as rehabilitation centers, nursing home beds, and medical imaging technologies.⁶ The process for obtaining a CON can take years and tens or even hundreds of thousands of dollars.⁷ By definition, CON programs *restrict* supply, making them unlikely to ensure an adequate supply of healthcare resources.⁸ Research on the supply of dialysis clinics⁹ and hospice care facilities¹⁰ finds that CON programs do, indeed, restrict the supply of both.

George Mason University Professor and Mercatus-affiliated scholar Thomas Stratmann led the most recent comprehensive study of the effect of CON programs on the supply of medical equipment.¹¹ Stratmann and his coauthor, Jacob Russ, report that there are on average 362 hospital beds per 100,000 people in the United States. Controlling for other factors, however, they find that states with CON programs have about 99 fewer hospital beds per 100,000 people than states without these regulations. Moreover, they find that CON programs that specifically regulate acute hospital beds are associated with an average of about 131 fewer hospital beds per 100,000 people relative to non-CON states.¹² Furthermore, they find that CON regulations reduce the number of hospitals with MRI machines by one to two hospitals per 500,000 people and that states that regulate MRI machines have, on average, 2.5 fewer hospitals providing MRI services than non-CON states.¹³ Taking Michigan as an example, this

means the state may have between 20 and 40 fewer hospitals offering MRI services than it would if it had no CON program.¹⁴

In separate research, Stratmann and his coauthor Matthew Baker find that patients in states with CON programs are more likely to travel longer distances in search of health care, a fact that has been documented by others.¹⁵ Finally, they assess the effect of CON regulations on nonhospital providers such as ambulatory surgical centers (ASCs), finding that—controlling for other factors—there are significantly fewer nonhospital providers of MRI and CT scans in CON states than in non-CON states.¹⁶ This may explain why hospital providers have a stronger market share in CON states than in non-CON states.¹⁷ It may also explain why hospitals tend to support CON regulation.¹⁸

2. DO CON PROGRAMS ENSURE ACCESS TO HEALTH CARE FOR RURAL COMMUNITIES?

Rural access to health care was a priority of the National Health Planning and Resources Development Act, and many states continue to justify their CON programs by claiming the regulations ensure care will be provided to residents in geographically underserved, economically depressed, or rural communities.¹⁹ Theory, however, suggests that a supply restriction will decrease, not increase, access to care. And, as I have noted, researchers have found that CON regulation is associated with longer travel distance to care.²⁰ In recent research, Stratmann and his colleague Christopher Koopman explicitly address the question of rural access to hospitals and hospital substitutes such as ambulatory surgical centers.²¹

Examining over 25 years' worth of data and controlling for other factors that might influence the number of hospitals, they find that states with CON programs not only have 30 percent fewer total hospitals per 100,000 residents, but also have 30 percent fewer *rural* hospitals per 100,000 residents compared with non-CON states. Moreover, their research finds

There is no evidence that states with CON programs provide any more charity care or care to underserved communities than states without CON programs. In fact, CON regulation seems to increase racial disparities in the provision of certain services.

that states with ASC-specific CON restrictions had on average 13 percent fewer rural ASCs per 100,000 residents compared with non-CON states.²²

Their findings are consistent with previous research that found that CON programs correlate with less rural access to hospice care.²³ In short, there is no evidence to indicate that CON programs increase access to care, and they may actually be limiting access for rural residents of CON states.

3. DO CON PROGRAMS PROMOTE HIGH-QUALITY HEALTH CARE?

Unlike other regulatory regimes, such as occupational licensure and scope-of-practice rules, CON regulations do not specifically aim to improve quality.²⁴ That is, CON regulators typically do not attempt to assess whether providers are qualified to do their jobs, focusing instead on whether there is an economic “need” for their services. Nevertheless, CON advocates sometimes claim that because CON regulations reduce the number of institutions providing care, they will cause more procedures to be performed by the institutions that do obtain permission. Thus, the argument goes, practitioners in CON states will tend to see more patients with the same conditions and therefore might become more specialized and proficient.²⁵ This theory must be weighed against competing theories that suggest that competition tends to increase quality, especially when regulations prevent price competition.²⁶

Much of the literature assessing the effect of CON regulation on quality has tended to focus on individual conditions and procedures, and researchers have had a difficult time disentangling causation from correlation. These studies either suggest that CON

regulation has no effect on quality²⁷ or come to different conclusions about the effect.²⁸

In recent research, Stratmann and his coauthor David Wille attempt to overcome the shortcomings of these research designs in two ways.²⁹ First, they assess the effect of CON regulation using data pertaining to multiple aspects of the patient experience, including readmission rates, mortality rates, and patient experience surveys. Second, they attempt to isolate the causal effect of CON regulation by comparing variation in hospital quality within markets that span CON and non-CON states. This allows them to control for market-specific differences that might otherwise confound estimates. They find that “in states where CON laws regulate provider entry into healthcare markets, incumbents tend to provide lower-quality services.”³⁰ In particular, they find that deaths from treatable complications following surgery and mortality rates from heart failure, pneumonia, and heart attacks are all significantly higher among hospitals in CON states than in non-CON states. They also find that in states with four or more CON restrictions patients are less likely to rate hospitals highly.

4. DO CON PROGRAMS ENSURE CHARITY CARE FOR THOSE UNABLE TO PAY OR FOR OTHERWISE UNDERSERVED COMMUNITIES?

If CON programs limit the overall supply of health care, perhaps they do so by ensuring that supply is more equitably distributed. Some have argued that CON programs were established with the partial intent of creating a quid pro quo: by restricting competition, the regulation increases the profit of some providers who, in return, might use some

of this extra profit to subsidize medical services to the poor or underserved.³¹ In 11 states, CON statutes explicitly include requirements for the provision of charity care; in others, the quid pro quo is widely assumed.³²

While this presumed effect is theoretically possible, there is no evidence that hospitals in states with CON programs provide any more charity care or care to underserved communities than hospitals in states without CON programs. In fact, researchers have found that CON regulation seems to increase racial disparities in the provision of certain services.³³ Stratmann and Russ examine the level of uncompensated care across CON and non-CON states and, controlling for other factors, find that CON regulation has had no effect.³⁴

What is more, CON programs are a costly and poorly targeted means of ensuring charity care, especially when there are more direct means to achieve the same end.³⁵ For example, 26 states simply reimburse providers for at least a portion of any uncompensated care they provide.³⁶

5. DO CON PROGRAMS ENCOURAGE APPROPRIATE LEVELS OF HOSPITAL SUBSTITUTES AND HEALTHCARE ALTERNATIVES?

CON programs were once intended to promote lower-cost hospital substitutes such as ambulatory surgical centers. In the National Health Planning and Resources Development Act, Congress explicitly declared that “there are presently inadequate incentives for the use of appropriate alternative levels of health care, and for the substitution of ambulatory and intermediate care for inpatient hospital care.”³⁷

Ironically, many advocates of CON regulation now believe that ASCs and other hospital substitutes are a threat to the sustainability of hospitals and contend that CON laws are necessary to preserve community hospitals. Their concern is that ASCs cater to wealthier, less-complicated, and better-insured patients, “cream-skimming” these more profitable

patients away from hospitals, diminishing the profitability and long-term sustainability of the affected hospitals.³⁸ This thinking may explain why CON laws in 26 states and the District of Columbia now explicitly restrict the establishment and expansion of ASCs.

Research suggests that these restrictions significantly reduce access to alternative means of care, contrary to the original intent of CON advocates. Stratmann and Koopman, for example, find that states with ASC-specific CON restrictions have 14 percent fewer total ASCs per 100,000 residents and 13 percent fewer rural ASCs per 100,000 residents than non-CON states.³⁹ Additionally, Stratmann and Baker find that CON states have significantly fewer nonhospital providers of medical imaging services than non-CON states.⁴⁰

Furthermore, these restrictions on hospital alternatives do not seem to lead to any more community hospitals, as proponents of the cream-skimming argument contend. In fact, Stratmann and Koopman find that, controlling for other factors, CON laws are associated with 30 percent fewer hospitals per 100,000 residents and with 30 percent fewer rural hospitals per 100,000 residents.⁴¹ Thus, these regulations seem to restrict the supply of both hospitals and hospital substitutes.

6. DO CON PROGRAMS RESTRAIN THE COST OF HEALTHCARE SERVICES?

As they are today, policymakers in 1974 were concerned about healthcare price inflation, and Congress hoped that CON regulations would address the problem.⁴² Today, many states explicitly name cost control as a goal of their CON programs. The Virginia Certificate of Public Need Program’s website, for example, states that “the program seeks to contain health care costs while ensuring financial viability and access to health care for all Virginia at a reasonable cost.”⁴³

Cost is a per-unit concept. It refers to the amount of money needed to produce one unit of a product or service. Economic theory predicts that a supply

restriction such as CON regulation will increase per-unit costs by reducing supply. As economists Jon Ford and David Kaserman put it, “To the extent that CON regulation is effective in reducing net investment in the industry, the economic effect is to shift the supply curve of the affected service back to the left. . . . The effect of such supply shifts is to raise . . . [the] equilibrium price.”⁴⁴ The empirical evidence on how CON regulation affects cost has been consistent with economic theory, showing that CON regulation tends to increase the cost of healthcare services.⁴⁵

By decreasing the supply of health care, however, CON regulations also reduce the quantity of services consumed. So it is possible that CON regulations might reduce *overall spending* on healthcare services even if they increase the *cost per unit* of each service.⁴⁶ In recent research, I review the literature on CON regulations and healthcare spending.⁴⁷ Seven studies find that CON regulation increases healthcare spending,⁴⁸ two find no statistically significant effect,⁴⁹ and two find that CON regulation increases some expenditures while reducing others.⁵⁰ To date, only one study finds that CON regulation is associated with less healthcare spending.⁵¹ In this case, however, the connection is tenuous. The author finds that CON regulation is associated with fewer hospital beds, and he finds that fewer hospital beds are associated with slightly slower growth in aggregate healthcare expenditures per capita. Importantly, however, he finds that “certificate-of-need programs did not have a direct effect on healthcare expenditures.”⁵²

If the goal of CON regulation is to discourage excessive spending caused by the third-party payer problem and other distortions in the healthcare market that divorce consumers from cost considerations, then CON regulations are a poorly targeted method of achieving this end. As many healthcare experts have suggested, the best way to deal with this problem is to reform the policies that divorce consumers from cost.⁵³ In contrast, CON regulations restrict the ability of *everybody*—including customers who pay out of pocket—to access healthcare services.

CONCLUSION

CON programs are a remnant of an era in which it was thought that central regulatory planning could yield better outcomes by restricting the supply of services valued by consumers. Despite the fact that the federal government no longer encourages states to restrict the supply of healthcare services, 35 states and the District of Columbia still maintain CON programs. The justifications for these programs are compelling when they are taken at face value, but a review of the literature finds that CON regulations fail to achieve their worthy goals. This research is summarized in table 1.

For state policymakers eager to modernize their healthcare systems, the first step may be as simple as opening the door to competition. CON programs are effective barriers to entry that give incumbent providers an advantage over new providers.⁵⁴ Evidence suggests that CON programs reduce the supply of healthcare resources, limit rural access to health care, diminish the quality of health care provided at hospitals, fail to promote charity care, impede the supply of hospital substitutes, and raise healthcare prices and overall expenditures. Furthermore, CON programs have a disproportionate effect on nonhospital providers, which supports the theory that larger, more established hospitals are benefitting from these restrictions on competition.

Table 1. Summary of Research Addressing the Goals of Certificate-of-Need (CON) Laws in Health Care		
QUESTION	ANSWER	RESEARCH
1. Do CON programs ensure an adequate supply of healthcare resources?	No. CON regulation explicitly limits the establishment and expansion of healthcare facilities and is associated with fewer hospitals, ambulatory surgical centers, dialysis clinics, and hospice care facilities. It is also associated with fewer hospital beds and decreased access to medical imaging technologies. Residents of CON states are more likely than residents of non-CON states to leave their states in search of medical services.	Ford and Kaserman (1993); Carlson et al. (2010); Stratmann and Russ (2014); Stratmann and Baker (forthcoming); and Stratmann and Koopman (2016)
2. Do CON programs ensure access to health care for rural communities?	No. CON programs are associated with fewer hospitals overall, but also with fewer rural hospitals, rural hospital substitutes, and rural hospice care. Residents of CON states must drive further to obtain care than residents of non-CON states.	Cutler, Huckman, and Kolstad (2010); Carlson et al. (2010); and Stratmann and Koopman (2016)
3. Do CON programs promote high-quality health care?	Mostly likely not. While early research was mixed, more recent research suggests that deaths from treatable complications following surgery and mortality rates from heart failure, pneumonia, and heart attacks are all significantly higher among hospitals in CON states than hospitals in non-CON states. Also, in states with especially comprehensive CON programs, patients are less likely to rate hospitals highly.	Stratmann and Wille (2016)
4. Do CON programs ensure charity care for those unable to pay or for otherwise underserved communities?	No. There is no difference in the provision of charity care between states with CON programs and states without them, and CON regulation is associated with greater racial disparities in access to care.	DeLia et al. (2009) and Stratmann and Russ (2014)
5. Do CON programs encourage appropriate levels of hospital substitutes and healthcare alternatives?	No. CON regulations have a disproportionate effect on nonhospital providers of medical imaging services and are associated with 14 percent fewer total ambulatory surgical centers.	Stratmann and Baker (forthcoming) and Stratmann and Koopman (2016)
6. Do CON programs restrain the cost of healthcare services?	No. By limiting supply, CON regulations increase per-unit healthcare costs. Even though CON regulations might reduce overall healthcare spending by reducing the quantity of services that patients consume, the balance of evidence suggests that CON laws actually increase total healthcare spending.	Mitchell (2016) and Bailey (2016)

Sources: James Bailey, "Can Health Spending Be Reined In through Supply Restraints? An Evaluation of Certificate-of-Need Laws" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2016); Melissa D. A. Carlson et al., "Geographic Access to Hospice in the United States," *Journal of Palliative Medicine* 13, no. 11 (2010); David M. Cutler, Robert S. Huckman, and Jonathan T. Kolstad, "Input Constraints and the Efficiency of Entry: Lessons from Cardiac Surgery," *American Economic Journal: Economic Policy* 2, no. 1 (2010); Derek DeLia et al., "Effects of Regulation and Competition on Health Care Disparities: The Case of Cardiac Angiography in New Jersey," *Journal of Health Politics, Policy and Law* 34, no. 1 (2009); Jon M. Ford and David L. Kaserman, "Certificate-of-Need Regulation and Entry: Evidence from the Dialysis Industry," *Southern Economic Journal* 59, no. 4 (1993); Matthew D. Mitchell, "Do Certificate-of-Need Laws Limit Spending?" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2016); Thomas Stratmann and Matthew C. Baker, "Winners and Losers from Barriers to Entry in the Healthcare Markets: Evidence from Certificate-of-Need Laws" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, forthcoming); Thomas Stratmann and Christopher Koopman, "Entry Regulation and Rural Health Care: Certificate-of-Need Laws, Ambulatory Surgical Centers, and Community Hospitals" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2016); Thomas Stratmann and Jacob W. Russ, "Do Certificate-of-Need Laws Increase Indigent Care?" (Working Paper No. 14-20, Mercatus Center at George Mason University, Arlington, VA, 2014); Thomas Stratmann and David Wille, "Certificate-of-Need Laws and Hospital Quality" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2016).

NOTES

1. National Health Planning and Resources Development Act of 1974, Pub. L. No. 93-641, 88 Stat. 2225 (1975) (codified at 42 U.S.C. §§ 300k-300n-5), repealed by Pub. L. No. 99-660, § 701, 100 Stat. 3799 (1986).
2. Matthew D. Mitchell and Christopher Koopman, "40 Years of Certificate-of-Need Laws across America," Mercatus Center at George Mason University, September 27, 2016.
3. Patrick John McGinley, "Beyond Health Care Reform: Reconsidering Certificate of Need Laws in a 'Managed Competition' System," *Florida State University Law Review* 23, no. 1 (1995).
4. New Hampshire is the state that most recently repealed its CON program, in the summer of 2016. Mitchell and Koopman, "40 Years of Certificate-of-Need Laws across America."
5. Each of these goals was first articulated in the National Health Planning and Resources Development Act of 1974.
6. Christopher Koopman and Anne Philpot, "The State of Certificate-of-Need Laws in 2016," Mercatus Center at George Mason University, September 27, 2016.
7. Kent Hoover, "Doctors Challenge Virginia's Certificate-of-Need Requirement," *Business Journals*, June 5, 2012.
8. As two economists put it, "To the extent that CON regulation is effective in reducing net investment in the industry, the economic effect is to shift the supply curve of the affected service back to the left." Jon M. Ford and David L. Kaserman, "Certificate-of-Need Regulation and Entry: Evidence from the Dialysis Industry," *Southern Economic Journal* 59, no. 4 (1993): 783.
9. *Ibid.*
10. Melissa D. A. Carlson et al., "Geographic Access to Hospice in the United States," *Journal of Palliative Medicine* 13, no. 11 (2010).
11. Thomas Stratmann and Jacob W. Russ, "Do Certificate-of-Need Laws Increase Indigent Care?" (Working Paper No. 14-20, Mercatus Center at George Mason University, Arlington, VA, 2014).
12. An acute hospital bed is one intended for short-term use.
13. Stratmann and Russ, "Do Certificate-of-Need Laws Increase Indigent Care?"
14. Christopher Koopman, Thomas Stratmann, and Mohamad Elbarasse, "Certificate of Need Laws: Implications for Michigan" (Mercatus on Policy, Mercatus Center at George Mason University, Arlington, VA, May 2015).
15. Thomas Stratmann and Matthew C. Baker, "Winners and Losers from Barriers to Entry in the Healthcare Markets: Evidence from Certificate-of-Need Laws" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, forthcoming). For the previous research documenting this, see David M. Cutler, Robert S. Huckman, and Jonathan T. Kolstad, "Input Constraints and the Efficiency of Entry: Lessons from Cardiac Surgery," *American Economic Journal: Economic Policy* 2, no. 1 (2010).
16. Stratmann and Baker, "Winners and Losers from Barriers to Entry in the Healthcare Markets."
17. *Ibid.*
18. In early research, national health planning consultants Ken Wing and A. G. Schneider identified this possibility: "A certificate of need program can also be distorted into a tool for the protection of established provider interests." Ken Wing and A. G. Schneider, "National Health Planning and Resources Development Act of 1974: Implications for the Poor," *Clearinghouse Review*, February 1976, 691. See also the large literature on regulatory capture: George J. Stigler, "The Theory of Economic Regulation," *Bell Journal of Economics and Management Science* 2, no. 1 (1971); Ernesto Dal Bó, "Regulatory Capture: A Review," *Oxford Review of Economic Policy* 22, no. 2 (2006); Patrick A. McLaughlin, Matthew D. Mitchell, and Ethan Roberts, "Regulatory Subsidies: How Regulations Can Become Privileges for Firms and Burdens for Consumers" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, forthcoming).
19. See Thomas Stratmann and Christopher Koopman, "Entry Regulation and Rural Health Care: Certificate-of-Need Laws, Ambulatory Surgical Centers, and Community Hospitals" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2016), 8n6.
20. Cutler, Huckman, and Kolstad, "Input Constraints and the Efficiency of Entry"; Stratmann and Baker, "Winners and Losers from Barriers to Entry in the Healthcare Markets."
21. Stratmann and Koopman, "Entry Regulation and Rural Health Care."
22. *Ibid.*
23. Carlson et al., "Geographic Access to Hospice in the United States."
24. On whether these other types of regulations achieve their aim, see Morris M. Kleiner and Alan B. Krueger, "Analyzing the Extent and Influence of Occupational Licensing on the Labor Market," *Journal of Labor Economics* 31, no. S1 (2013); Morris M. Kleiner et al., "Relaxing Occupational Licensing Requirements: Analyzing Wages and Prices for a Medical Service" (NBER Working Paper No. 19906, National Bureau of Economic Research, Cambridge, MA, 2014); Patrick A. McLaughlin, Jerry Ellig, and Dima Yazji Shamoun, "Regulatory Reform in Florida: An Opportunity for Greater Competitiveness and Economic Efficiency," *Florida State University Business Review* 13, no. 1 (2014); Department of the Treasury Office of Economic Policy, Council of Economic Advisers, and Department of Labor, *Occupational Licensing: A Framework for Policymakers*, July 2015.
25. John Steen, "Regionalization for Quality: Certificate of Need and Licensure Standards" (American Health Planning Association, March 2004).
26. Martin Gaynor, "What Do We Know About Competition and Quality in Health Care Markets?" (NBER Working Paper No. 12301, National Bureau of Economic Research, Cambridge, MA, 2006).
27. Daniel Polsky et al., "The Effect of Entry Regulation in the Health Care Sector: The Case of Home Health," *Journal of Public Economics* 110 (February 2014).
28. Evidence about the effect of CON regulation on the quality of coronary artery bypass grafting is especially mixed. Mary S. Vaughan-Sarrazin and her coauthors find that CON regulation reduces mortality rates related to the procedure, David M. Cutler and his coauthors find that CON regulation increases mortality rates after the procedure, and Vivian Ho and her colleagues find that states that drop CON regulation see a temporary reduction in mortality rates related to the procedure relative to states that keep it. Mary S. Vaughan-Sarrazin et al., "Mortality in Medicare Beneficiaries Following Coronary Artery Bypass Graft Surgery in States with and without Certificate of Need Regulation," *Journal of the American Medical Association* 288, no. 15 (2002); Cutler,

- Huckman, and Kolstad, "Input Constraints and the Efficiency of Entry"; Vivian Ho, Meei-Hsiang Ku-Goto, and James G. Jollis, "Certificate of Need (CON) for Cardiac Care: Controversy over the Contributions of CON," *Health Services Research* 44, no. 2p1 (2009).
29. Thomas Stratmann and David Wille, "Certificate-of-Need Laws and Hospital Quality" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2016).
 30. *Ibid.*, 3.
 31. Dwayne A. Banks, Stephen E. Foreman, and Theodore E. Keeler, "Cross-Subsidization in Hospital Care: Some Lessons from the Law and Economics of Regulation," *Health Matrix: Journal of Law-Medicine* 9 (1999): 1; Guy David et al., "Do Hospitals Cross-Subsidize?," *Journal of Health Economics* 37, no. C (2014).
 32. "Free Care Compendium: National Snapshot," Community Catalyst, accessed April 18, 2016, <http://www.communitycatalyst.org/initiatives-and-issues/initiatives/hospital-accountability-project/free-care/national-snapshot>.
 33. Derek DeLia et al., "Effects of Regulation and Competition on Health Care Disparities: The Case of Cardiac Angiography in New Jersey," *Journal of Health Politics, Policy and Law* 34, no. 1 (2009).
 34. "We do not find any evidence of an increase in indigent care. Our coefficients are small in magnitude, not statistically different from zero, and the direction of the effect changes across specifications." Stratmann and Russ, "Do Certificate-of-Need Laws Increase Indigent Care?," 18.
 35. See section 6 for a discussion of CON regulation's costliness.
 36. "Free Care Compendium: National Snapshot."
 37. Pub. L. No. 93-641, 88 Stat. 2226.
 38. Ann Tynan et al., "General Hospitals, Specialty Hospitals and Financially Vulnerable Patients" (Research Brief No. 11, Center for Studying Health System Change, Washington, DC, April 2009).
 39. Stratmann and Koopman, "Entry Regulation and Rural Health Care."
 40. Stratmann and Baker, "Winners and Losers from Barriers to Entry in the Healthcare Markets."
 41. Stratmann and Koopman, "Entry Regulation and Rural Health Care."
 42. In the National Health Planning and Resources Development Act, Congress noted that "increases in the cost of health care, particularly of hospital stays, have been uncontrollable and inflationary." Pub. L. No. 93-641, 88 Stat. 2226.
 43. "Certificate of Public Need Program," Virginia Department of Health, accessed November 1, 2016.
 44. Ford and Kaserman, "Certificate-of-Need Regulation and Entry," 783-84.
 45. Monica Noether, "Competition among Hospitals," *Journal of Health Economics* 7, no. 3 (1988); David C. Grabowski, Robert L. Ohsfeldt, and Michael A. Morrisey, "The Effects of CON Repeal on Medicaid Nursing Home and Long-Term Care Expenditures," *Inquiry: A Journal of Medical Care Organization, Provision and Financing* 40, no. 2 (2003); Vivian Ho and Meei-Hsiang Ku-Goto, "State Deregulation and Medicare Costs for Acute Cardiac Care," *Medical Care Research and Review* 70, no. 2 (2013); James Bailey, "Can Health Spending Be Reined In through Supply Restraints? An Evaluation of Certificate-of-Need Laws" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2016).
 46. In order for this to be the case, however, the demand for healthcare services would need to be elastic, and the evidence suggests that it is not elastic. Ford and Kaserman, "Certificate-of-Need Regulation and Entry," 783; Bailey, "Can Health Spending Be Reined In through Supply Restraints?"
 47. Matthew D. Mitchell, "Do Certificate-of-Need Laws Limit Spending?" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2016).
 48. Frank A. Sloan and Bruce Steinwald, "Effects of Regulation on Hospital Costs and Input Use," *Journal of Law & Economics* 23, no. 1 (1980); Joyce A. Lanning, Michael A. Morrisey, and Robert L. Ohsfeldt, "Endogenous Hospital Regulation and Its Effects on Hospital and Non-hospital Expenditures," *Journal of Regulatory Economics* 3, no. 2 (1991); John J. Antel, Robert L. Ohsfeldt, and Edmund R. Becker, "State Regulation and Hospital Costs," *Review of Economics and Statistics* 77, no. 3 (1995); Nancy A. Miller, Charlene Harrington, and Elizabeth Goldstein, "Access to Community-Based Long-Term Care: Medicaid's Role," *Journal of Aging and Health* 14, no. 1 (2002); 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); Patrick A. Rivers, Myron D. Fottler, and Jemima A. Frimpong, "The Effects of Certificate of Need Regulation on Hospital Costs," *Journal of Health Care Finance* 36, no. 4 (2010); Bailey, "Can Health Spending Be Reined In through Supply Restraints?"
 49. Frank A. Sloan, "Regulation and the Rising Cost of Hospital Care," *Review of Economics and Statistics* 63, no. 4 (1981); Grabowski, Ohsfeldt, and Morrisey, "Effects of CON Repeal on Medicaid Nursing Home and Long-Term Care Expenditures."
 50. 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); Momotazur Rahman et al., "The Impact of Certificate-of-Need Laws on Nursing Home and Home Health Care Expenditures," *Medical Care Research and Review: MCRR* 73, no. 1 (2016).
 51. Fred J. Hellinger, "The Effect of Certificate-of-Need Laws on Hospital Beds and Healthcare Expenditures: An Empirical Analysis," *American Journal of Managed Care* 15, no. 10 (2009).
 52. *Ibid.*, 737.
 53. John Cochrane, "After the ACA: Freeing the Market for Health Care" (expanded version of remarks at The Future of Health Care Reform in the United States, University of Chicago Law School, June 2014).
 54. There are a host of economic and social problems with regulations that favor particular firms. Matthew D. Mitchell, *The Pathology of Privilege: The Economic Consequences of Government Favoritism* (Arlington, VA: Mercatus Center at George Mason University, 2014).

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