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# Nudges for Health Policy: Effectiveness and Limitations

Victoria A. Shaffer\*

## I. THE PROBLEM

The United States spends a far greater proportion of its income on healthcare than other high-income nations, but we get less benefit for our efforts.<sup>1</sup> The United States has poor health outcomes including the lowest life expectancy at birth, the highest rate of infant mortality, and much higher rates of obesity and other chronic diseases compared to our peer nations.<sup>2</sup> Our healthcare system is also typified by inequalities.<sup>3</sup> Health outcomes vary considerably by income as well as race and ethnicity.<sup>4</sup> And, at the end of 2015, our country had approximately twenty-eight and a half million uninsured non-elderly Americans.<sup>5</sup>

One tool that our government can use to combat these challenges is the use of health policy in the form of programs, regulations, and agencies that are aimed at improving the overall health and welfare of Americans.<sup>6</sup> Of the various approaches to shaping health policy, this paper will focus on the use of “nudges,” a behavioral strategy for shaping human behavior from the framework, *Libertarian Paternalism*. In this Article, a nudge is defined as any aspect of choice architecture or any method of structuring the choice environment that influences behavior in a predictable way, with the restriction that this tool may not constrain or remove choices nor can it significantly increase the cost associated with any of the options. This definition is largely consistent with the

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1. DAVID SQUIRES & CHLOE ANDERSON, U.S. HEALTH CARE FROM A GLOBAL PERSPECTIVE: SPENDING, USE OF SERVICES, PRICES, AND HEALTH IN 13 COUNTRIES 2, 7 (2015), [http://www.commonwealthfund.org/~media/files/publications/issue-brief/2015/oct/1819\\_squires\\_us\\_hlt\\_care\\_global\\_perspective\\_oecd\\_intl\\_brief\\_v3.pdf](http://www.commonwealthfund.org/~media/files/publications/issue-brief/2015/oct/1819_squires_us_hlt_care_global_perspective_oecd_intl_brief_v3.pdf).

2. *Id.* at 7–9.

3. Raj Chetty et al., *The Association Between Income and Life Expectancy in the United States, 2001–2014*, 315 JAMA 1750, 1763 (2016); David R. Williams & Ronald Wyatt, *Racial Bias in Health Care and Health: Challenges and Opportunities*, 314 JAMA 555, 555–56 (2015).

4. Chetty et al., *supra* note 3, at 1762–63; Williams & Wyatt, *supra* note 3, at 555–56.

5. HENRY J. KAISER FAMILY FOUND., KEY FACTS ABOUT THE UNINSURED POPULATION 1 (2016), <http://files.kff.org/attachment/Fact-Sheet-Key-Facts-about-the-Uninsured-Population>.

6. See RICHARD H. THALER & CASS R. SUNSTEIN, NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS 159–82 (2008).

original conception by Thaler and Sunstein.<sup>7</sup> This work was informed by the author's participation in the Behavioral Science & Policy Association working group on the application of insights from behavioral economics to health and healthcare. The working group produced a report, jointly commissioned by the Behavioral Science and Policy Association and the White House Social and Behavioral Sciences Team, that identified opportunities for federal-level behavioral policy interventions to improve the health and well-being of Americans.<sup>8</sup>

## II. HEALTH POLICY ≠ OTHER POLICY DOMAINS

Before examining the evidence for the effectiveness of nudges in health policy, it is important to discuss the ways in which health policy differs from other policy domains. First, there are unique economic and political forces that shape the health policy landscape.<sup>9</sup> Second, health policy is aimed at addressing complex health behaviors that are rooted in American culture and are an integral part of societal interactions (e.g., eating, drinking, recreational drug use).<sup>10</sup> Changing these types of deeply entrenched behaviors requires health policies that are comprehensive and multidimensional.<sup>11</sup> Such an approach may include the coordinated implementation of traditional economic policies (e.g., taxes) alongside behaviorally informed strategies (e.g., nudges).<sup>12</sup> For example, a historical look at the rates of smoking in the United States reveals that smoking declined substantially with the combined dispensation of taxes, restrictions on advertising, and public smoking bans.<sup>13</sup> Thus, although nudges have had profound successes in other domains (e.g., automatic enrollment has increased the amount of retirement savings), it is unlikely that nudges in health policy will produce similar singular successes.<sup>14</sup>

## III. EFFECTIVENESS OF NUDGES AS HEALTH POLICY TOOLS

In this section, I review research that provides examples of effective nudges in health-related domains. However, I want to clarify that the intent of this manuscript is *not* to advocate for nudges as the panacea for our country's systemic health issues. Rather, the vision is more simply that nudges will be one of several tools available in the health policy toolbox. In this Article, I do not provide an exhaustive review of the efficacy of nudges for all areas of

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7. *See id.* at 6.

8. *See* George Loewenstein et al., *A Behavioral Blueprint for Improving Health Care Policy*, 3 BEHAVIORAL SCI. & POL. 53 (2017).

9. *See id.* at 55.

10. *Id.*

11. *See id.*

12. *Id.*

13. *Id.*

14. *See id.* at 53.

health and health behavior. Rather, I summarize research from three areas where nudges have been successful in improving health or optimizing the healthcare system.

### A. Promotion of Healthy Eating

The first area in which nudges have demonstrated successful use is in the promotion of healthy eating, which refers to either decreasing the overall caloric consumption or increasing the amount of healthy food consumed.<sup>15</sup> One particularly successful nudge in this area is the strategically designed cafeteria.<sup>16</sup> The bulk of this research has been done in school cafeterias with elementary-aged children or adolescents.<sup>17</sup> There are a number of methods for designing a cafeteria to promote healthy eating, including placing fresh fruit next to the cash register for convenience and to increase the health of impulse buys.<sup>18</sup> Choice architects have also focused on the order that food is presented in the cafeteria lunch line.<sup>19</sup> Placing the healthiest foods at the beginning of the lunch line or in front of less healthy choices encourages children to begin filling their plates with more healthy choices, leaving less room for the less healthy desserts or junk foods at the end of the line.<sup>20</sup>

Trayless dining is a second method of organizing the choice environment to encourage better food choices.<sup>21</sup> By simply eliminating trays, people can buy only what they can carry, which is typically a plate of food and a drink.<sup>22</sup> Structuring the environment in these ways decreases the likelihood of food waste,<sup>23</sup> although this may actually result in less healthy eating.<sup>24</sup> Finally, the

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15. See Andrew S. Hanks, David R. Just & Brian Wansink, *Smarter Lunchrooms Can Address New School Lunchroom Guidelines and Childhood Obesity*, 162 J. PEDIATRICS 867, 868 (2013).

16. *Id.* at 867.

17. See *id.*; see also THALER & SUNSTEIN, *supra* note 6, at 1–2 (exemplifying how choice architecture can be employed in a school cafeteria).

18. Hanks, Just & Wansink, *supra* note 15, at 868.

19. Juliana F.W. Cohen et al., *Effects of Choice Architecture and Chef-Enhanced Meals on the Selection and Consumption of Healthier School Foods: A Randomized Clinical Trial*, 169 JAMA PEDIATRICS 431, 432 (2015).

20. See *id.* at 432, 436; Mitesh S. Patel & Kevin G. Volpp, *Nudging Students Toward Healthier Food Choices – Applying Insights from Behavioral Economics*, 169 JAMA PEDIATRICS 425, 425–26 (2015).

21. Krisha Thiagarajah & Victoria M. Getty, *Impact on Plate Waste of Switching from a Tray to a Trayless Delivery System in a University Dining Hall and Employee Response to the Switch*, 113 J. ACAD. NUTRITION & DIETETICS 141, 141 (2013).

22. See *id.* at 143–44.

23. *Id.* at 143.

24. Brian Wansink & David R. Just, *Trayless Cafeterias Lead Diners to Take Less Salad and Relatively More Dessert*, 18 PUB. HEALTH NUTRITION 1535, 1535–36 (2013).

shapes and sizes of packaging and plates themselves have been used to decrease consumption.<sup>25</sup> One fairly robust finding is that larger containers lead to more food consumed, while smaller containers result in less food consumed,<sup>26</sup> even when the food being consumed is undesirable. Further, wide or large serving containers (e.g., glasses, plates) affect the perception about the amount of food consumed.<sup>27</sup> When drinking liquids, people typically judge the amount consumed by how much the height of the liquid decreases without taking the width of the glass into account.<sup>28</sup> People consume more liquid when given short, wide glasses than when drinking out of tall, narrow glasses.<sup>29</sup> Therefore, you can easily manipulate the food environment at your dinner table to nudge the desired consumption behavior. If you want your child to drink more milk, serve it a short, fat glass, but if you want your friend to drink less beer, serve it in a tall, skinny glass. In all of these examples, people can be nudged into changing their eating or drinking behaviors through a simple change of the environment.

### B. Overutilization in Healthcare

A second area in which nudges have been effective is decreasing overutilization in healthcare.<sup>30</sup> For example, it has long been recognized that the prescription of antibiotics for viral infections is ineffective and potentially dangerous for individual and public health.<sup>31</sup> If a patient is prescribed an antibiotic for symptoms that are likely viral in nature (e.g., persistent cough, conjunctivitis), their symptoms will not improve by taking an antibiotic, and they may potentially experience side effects such as gastrointestinal symptoms/conditions (e.g., diarrhea or *C. difficile*) or contraception failure.<sup>32</sup> Perhaps more importantly, prescribing antibiotics for viruses can lead to the development of antibiotic resistant strains of bacteria.<sup>33</sup> Despite these negative consequences, clinicians still routinely prescribe antibiotics for symptoms that are likely

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25. Brian Wansink & Junyong Kim, *Bad Popcorn in Big Buckets: Portion Size Can Influence Intake as Much as Taste*, 37 J. NUTRITION EDUC. & BEHAV. 242, 242–44 (2005).

26. *Id.* at 244.

27. Brian Wansink, *Environmental Factors That Increase the Food Intake and Consumption Volume of Unknowing Consumers*, 24 ANN. REV. NUTRITION 455, 468–69 (2004); Wansink & Kim, *supra* note 25, at 244.

28. Wansink, *supra* note 27, at 468–69.

29. *Id.*

30. See Daniella Meeker et al., *Effect of Behavioral Interventions on Inappropriate Antibiotic Prescribing Among Primary Care Practices: A Randomized Clinical Trial*, 315 JAMA 562 (2016).

31. *Id.* at 563.

32. *Antibiotics Aren't Always the Answer*, CTRS. FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/features/getsmart/> (last updated Nov. 14, 2016).

33. Meeker et al., *supra* note 30, at 563.

caused by a virus.<sup>34</sup> In an attempt to reduce overprescribing of antibiotics, Meeker and colleagues have employed a type of nudge called an “accountable justification.”<sup>35</sup>

Imagine that a physician decides to order an antibiotic for a patient who has had a cough for a few weeks, which is now starting to worsen. The physician may be concerned that a secondary bacterial infection has developed in addition to the virus and want to prescribe an antibiotic to treat the patient. However, under this program, this specific combination of diagnosis (e.g., non-specific upper respiratory tract infection) and prescription drug order (e.g., antibiotic) is flagged in the electronic health record.<sup>36</sup> Therefore, when a physician decides to prescribe an antibiotic for this patient, they are prompted to provide a brief rationale for this decision.<sup>37</sup> Note that this nudge, like the food interventions described above, neither constrains choice nor significantly alters the cost of prescribing an antibiotic.<sup>38</sup> Physicians are still able to prescribe these medications after providing a short justification for their use. While an extremely low-cost intervention, these types of nudges have been wildly successful.<sup>39</sup> In one recent study, the use of an accountable justification program reduced the rates of antibiotic prescriptions for antibiotic-inappropriate diagnoses from 23.2% to 5.2% over eighteen months.<sup>40</sup>

Another type of nudge that has been effective at reducing overutilization in healthcare is the required second opinion.<sup>41</sup> Second opinions can also be employed to reduce the use of tests and procedures with questionable benefit, including screening tests for some cancers.<sup>42</sup> In the United States, the U.S. Preventative Services Task Force (“USPSTF”), an independent committee of national experts in preventative and evidence-based medicine, was created in 1984 to review clinical evidence and make written recommendations about the use of preventive health services (e.g., screenings and medications).<sup>43</sup> These recommendations are accompanied by a letter grade (A, B, C, D, or I) that symbolizes the quality of evidence for the recommendation and the ratio of

34. *Id.*

35. *Id.* at 564.

36. *Id.* at 563–64.

37. *Id.* at 564.

38. *Id.* at 569.

39. *See id.* at 564, 566.

40. *Id.* at 565.

41. Fernando Althabe et al., *Mandatory Second Opinion to Reduce Rates of Unnecessary Caesarean Sections in Latin America: A Cluster Randomised Controlled Trial*, 363 LANCET 1934, 1938 (2004).

42. *See Final Recommendation Statement: Prostate Cancer: Screening*, U.S. PREVENTATIVE SERVS. TASK FORCE, <https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/prostate-cancer-screening> (last updated May 2012).

43. *About the USPSTF*, U.S. PREVENTATIVE SERVS. TASK FORCE, <https://www.uspreventiveservicestaskforce.org/Page/Name/about-the-uspstf> (last updated May 2017).

benefits to harms for a particular preventive service.<sup>44</sup> In the academic health community, these recommendations are treated as the gold standard for determining the public health value of specific preventive services.<sup>45</sup> After reviewing the evidence based on the effectiveness of various screening tests, some screening tests have received a poor grade from the USPSTF.<sup>46</sup>

For example, the USPSTF gave prostate-specific antigen screening for prostate cancer a “D,” indicating that providers should *discourage* the use of this test to screen for prostate cancer in practice.<sup>47</sup> In addition, the USPSTF gave the use of mammograms to screen for breast cancer in women ages forty to forty-nine a “C,” which indicates that there is likely only a small net benefit to this service.<sup>48</sup> Its use should be based on a collaborative decision between doctors and their patients after an informed discussion about the benefits (e.g., possible early detection of cancer) and harms (e.g., high false positive rate) of undergoing screening.<sup>49</sup> Based on these recommendations, nudges, in the form of requiring second opinions to undergo screening for these tests, could be employed to reduce the use of these tests. Like other nudges, requiring a second opinion does not constrain choice, although it does place a somewhat greater burden on the cost of screening through the time and potential money required to get a second opinion. In the United States, policies of this type are highly politicized and have been labeled as “rationing healthcare.”<sup>50</sup> However, mandatory second opinions have been successfully employed in other countries, reducing use of the desired test or procedure.<sup>51</sup>

### C. Decreasing Costs of Healthcare

Finally, nudges have also been effective tools for decreasing healthcare costs. For example, the strategic selection of default settings within the electronic health record (“EHR”) is one method of nudging physicians toward more

44. *Id.*

45. Nelson E. Canter, *Legal Implications for Failure to Screen for Colorectal Cancer*, 39 WESTCHESTER B.J. 9, 10 (2014) (referring to USPTF as “practice guidelines which are authoritative practice guidelines to be followed in the medical field”).

46. See, e.g., *Final Recommendation Statement: Prostate Cancer: Screening*, *supra* note 42.

47. *Id.*

48. *Final Recommendation Statement: Breast Cancer: Screening*, U.S. PREVENTATIVE SERVICES TASK FORCE, <https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/breast-cancer-screening1> (last updated Jan. 2016).

49. *Id.*

50. Robert Pearl, *Why Healthcare Rationing Is a Growing Reality for Americans*, FORBES (Feb. 2, 2017, 9:00 AM), <https://www.forbes.com/sites/robertpearl/2017/02/02/why-healthcare-rationing-is-a-growing-reality-for-americans/#5c36a4152dba>.

51. Althabe et al., *supra* note 41, at 1934–40.

cost-effective practices.<sup>52</sup> Within an EHR, defaults often take the form of an item (test, medication, order, etc.) that has been preselected, based on some predetermined criteria, from a larger list of available choices.<sup>53</sup> Defaults should be chosen carefully because they can have an important impact on behavior.<sup>54</sup> For example, when completing medication orders for patients, one way to manipulate the default setting is to preselect the generic version of the drug when there are multiple options (including generic and name brand medications).<sup>55</sup> In this case, the default functions as a nudge because it gently reminds physicians of the generic option but does not constrain choice. The provider is free to order any medication; they only need to deselect the generic drug and select instead the desired medication. Nudges of this type have been incredibly successful at increasing the ratio of generic to name brand prescriptions.<sup>56</sup> Recent work by Malhotra and colleagues described large and sustained increases in the proportion of generic medications ordered after a drug-prescribing interface redesign that featured a generic drug default.<sup>57</sup> Specifically, the authors reported that the proportion of generic drugs prescribed increased from approximately forty percent to ninety-six percent after the implementation of this technology-based nudge.<sup>58</sup>

Additionally, nudges that promote the use of patient decision aids for treatments with uncertain benefit have led patients to opt for less invasive treatments over surgical interventions, resulting in a significant decrease in costs associated with treatment.<sup>59</sup> Patient decision aids are tools to provide patients with balanced evidence about their options for treatment when the decision is preference sensitive or when there is clinical equipoise.<sup>60</sup> In these cases, there is no single, dominant evidence-based treatment; therefore, individual decisions are based on the patient's preferences for care and the weight they place on the benefits and harms of treatment.<sup>61</sup> For example, treatments for low back

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52. See C. Adam Probst & Victoria A. Shaffer, *The Effect of Defaults in an Electronic Health Record on Laboratory Test Ordering Practices for Pediatric Patients*, 32 HEALTH PSYCHOL. 995 (2013).

53. See *id.* at 996.

54. See Shlomo Benartzi & Richard H. Thaler, *Behavioral Economics and the Retirement Savings Crisis*, 339 SCIENCE 1152, 1152–53 (finding that the percentage of U.S. employers that offer 401(k) plans that automatically enroll employees escalates savings rates).

55. Sameer Malhotra et al., *Effects of an E-prescribing Interface Redesign on Rates of Generic Drug Prescribing: Exploiting Default Options*, 23 J. AM. MED. INFO. ASS'N. 891, 891 (2016).

56. *Id.* at 894.

57. *Id.*

58. *Id.* at 895.

59. David Arterburn et al., *Introducing Decision Aids at Group Health Was Linked to Sharply Lower Hip and Knee Surgery Rates and Costs*, 31 HEALTH AFF. 2094, 2094 (2012).

60. See *id.*

61. See *id.*



pain and knee pain typically involve noninvasive treatment options, such as physical therapy, diet, and exercise, or elective surgery.<sup>62</sup> Comparative effectiveness studies have revealed that the two treatments result in similar outcomes, leaving patients to weigh the pros and cons of each choice.<sup>63</sup> Additionally complicating the decision landscape is the fact that subspecialties often disagree about which approach to recommend (e.g., surgeons recommend surgery; primary care providers recommend behavioral alternatives).<sup>64</sup> Therefore, the use of patient decision aids represents an important unbiased informational tool that can help patients make treatment choices that better match their preferences for care.<sup>65</sup>

However, when patients are given decision aids for preference-sensitive decisions, they show an increased preference for the noninvasive treatment.<sup>66</sup> Arterburn and colleagues reported that introducing decision aids in a large healthcare system reduced hip replacements by twenty-six percent and knee replacements by thirty-eight percent, ultimately lowering costs twelve to twenty-one percent over six months.<sup>67</sup> It is worth emphasizing that the required use of patient decision aids to inform decision making still clearly fits within the parameters of a nudge, where patient choice is ultimately unconstrained (patients may opt for behavioral or surgical interventions). However, the underlying premise is that when given a choice, most people prefer to avoid surgery when possible.<sup>68</sup> This preference will ultimately lead to fewer surgeries because patients have historically been poorly informed about their choices.<sup>69</sup> Recently several states have addressed the use of patient decision aids by introducing laws that either mandate or incentivize shared decision making through high-quality decision aids.<sup>70</sup>

The use of nudges in health information technology has become an increasingly popular tool due in part to the HITECH Act (Health Information

62. *See id.* at 2094, 2101.

63. *See id.* at 2094–95.

64. *See* John D. Birkmeyer et al., *Understanding of Regional Variation in the Use of Surgery*, 382 LANCET 1121, 1123 (2013); *see also* Floyd J. Fowler, Jr. et al., *Comparison of Recommendations by Urologists and Radiation Oncologists for Treatment of Clinically Localized Prostate Cancer*, 283 JAMA 3217, 3217 (2000) (concluding that “specialists overwhelmingly recommend the therapy that they themselves deliver”).

65. *See* Dawn Stacey et al., *Decision Aids for People Facing Health Treatment or Screening Decisions*, 4 COCHRANE DATABASE SYSTEMATIC REVIEWS 28 (2017).

66. *Id.* at 29.

67. Arterburn et al., *supra* note 59, at 2100.

68. *See id.* at 2094–95.

69. Annette M. O’Connor et al., *Toward the ‘Tipping Point’: Decision Aids and Informed Patient Choice*, 26 HEALTH AFF. 716, 717 (2007).

70. *See generally* Thaddeus Mason Pope, *Certified Patient Decision Aids: Solving Persistent Problems with Informed Consent Law*, 45 J.L. MED. & ETHICS 12 (2017) (discussing “right to know” legislation across several states and in a variety of medical contexts, including Washington’s efforts to certify high-quality decision aids).

Technology for Economic and Clinical Health), Title XIII of the American Recovery and Reinvestment Act of 2009.<sup>71</sup> This legislation established incentive payments to accelerate the “meaningful use” of health information technology, which encourages the use of technology to improve the quality and safety of healthcare and to engage patients and their families.<sup>72</sup> Nudges are one important method of meeting the meaningful use criteria and can be integrated into EHRs in the form of defaults, accountable justification, second opinions, and the automatic delivery of patient decision aids. In addition to promoting healthy eating, reducing overutilization of healthcare, and reducing cost, nudges have the potential to be a useful tool in shaping additional behaviors such as health insurance enrollment, disease and lifestyle management, and advance care planning.

#### IV. DIFFICULTY STUDYING NUDGES IN HEALTH

Although nudges have had significant successes in these areas, it is extremely important to continue empirically testing the efficacy of new nudges. The field has not been sufficiently explored to warrant the implementation of new nudge-based policies without data to support policy effectiveness. Policies about organ donation provide a case study on the consequences of adopting nudges as policy without sufficient data. Initially, interest around the impact of nudges on organ donation was heightened after a seminal paper by Johnson and Goldstein,<sup>73</sup> which discussed the association between a country’s default policy for organ donation and the rates of organ donation in that country. The paper compared the organ donation rates of countries with an opt-in policy (by default people in these countries were *not* organ donors but could opt in if desired) to those of countries with an opt-out policy (citizens in these countries were automatically organ donors unless they chose to opt out) and reported that rates of organ donation were dramatically higher in opt-out countries (~90%) than opt-in countries (~10%).<sup>74</sup> On the basis of this work, which was largely focused on policy-level analyses and thought experiments, many U.S. states have changed their organ donation registration processes.<sup>75</sup> However, no experiments had been conducted on actual organ donation registration data. A recent working paper produced by the National Bureau of Economic Research examined organ donation rates in the state of California after it moved from an opt-in program to an “active choice” program.<sup>76</sup> An active choice program

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71. Bradford William Hesse et al., *Nudging Best Practice: The HITECH Act and Behavioral Medicine*, 1 TRANSLATIONAL BEHAV. MED. 175 (2011).

72. *See id.* at 176.

73. Eric J. Johnson & Daniel Goldstein, *Do Defaults Save Lives?*, 302 SCIENCE 1338 (2003).

74. *Id.* at 1338.

75. Judd B. Kessler & Alvin E. Roth, *Don’t Take ‘No’ for an Answer: An Experiment with Actual Organ Donor Registrations 2* (Nat’l Bureau of Econ. Research, Working Paper No. 20,378, 2014).

76. *Id.* at 2, 7.

requires people to directly answer the question, “Do you want to be an organ donor?,” with a “yes” or “no.” Despite high hopes for the active choice paradigm, switching did not increase the number of people who chose to be organ donors in the state of California.<sup>77</sup> In contrast, there is some evidence that the active choice programs may actually result in a decrease in organ donation rates, underscoring the importance of continued research efforts to inform policy.<sup>78</sup>

Despite the need for research-based health policy, it is quite difficult in practice to conduct randomized field studies on health topics given the layers of privacy protections around personal health data. Therefore, to extend the depth and breadth of research on health policy, there is an urgent need to: 1) clarify rules governing the ability of firms and public agencies to conduct field studies and 2) grant regulatory exceptions when warranted. Although this may seem like governmental overreach, there is precedent for relaxing privacy protections around personal data to inform policy. The Consumer Financial Protection Bureau, a government agency created in 2008 to monitor the financial marketplace with the goal of protecting consumers, has the authority to grant regulatory exceptions to firms to facilitate research on consumer protection.<sup>79</sup> To employ nudges as effective and efficient tools in our health policy toolbox, real world data and field experiments are required elements of the policy development process.

## V. CONCLUSIONS

Nudges will not be a salve for the myriad of health-related issues facing the United States today. However, nudges are one tool that can have a major impact on health behavior when used in a targeted fashion. Nudges, in the form of accountable justifications, defaults, and choice architecture, are effective methods of increasing desired health behaviors and improving adherence to clinical guidelines. To date, nudges have been used to promote healthy eating, reduce overutilization of healthcare, and decrease healthcare costs. Nudge-based health policies are also likely to grow in popularity, particularly in the context of EHRs. There are currently incentives for promoting meaningful use of the health information technologies, and nudges represent a simple way to meet the meaningful use criteria.

While nudges have effectively shaped health behavior in some areas, we must continue to evaluate the effectiveness of nudges by granting access to health data and enabling continued evidence-based assessment of nudge-based health policies. Finally, given that the problems facing the health of our nation are multi-faceted and complex, they will only be adequately addressed through multidimensional and comprehensive approaches to health policy combining both traditional economic policies and behaviorally informed strategies.

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77. *Id.* at 7–10.

78. *Id.* at 10.

79. Loewenstein et al., *supra* note 8, at 61–62.