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The Tragedy of the Human Commons

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CONTENTS

INTRODUCTION

Tragedy of the commons occurs when individuals overuse or fail to invest in improving a common resource such as water, air, forests, or fisheries because part of the cost of overusing or failing to improve the resource is borne by other users, even though, in the long run, overusing

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or failing to improve the resources leaves everyone worse off.[1] *Tragedy of the human commons* occurs when the common resource at issue is human beings. Because humans, unlike trees or fish, behave strategically and the welfare of humans, unlike that of trees or fish, matters for its own sake, tragedy of the human commons presents different problems and can be solved in different ways. In this Article, we explore one important example of tragedy of the human commons: health insurers' failure to make long-term investments in improving the health of their common resource, the pool of insureds who switch among them.

A central complaint about health insurance in the United States—made, for example, by the Clinton campaign[2] and by Michael Moore in his new movie, *Sicko*—is that insurers do not cover preventive care and other treatments that have high up-front cost but result in substantial long-term benefits, even when doing so is prospectively efficient in that covering such treatments would keep people healthier at a lower total cost. Insurers decline to cover such treatments because they expect to benefit, through reduced claims, from the improved health of an insured only for so long as the insured remains one of their insureds. Once an insured switches to a different insurer, the subsequent insurer, rather than the original insurer, benefits from the insured's increased health. Indeed, the insured, or the insured's employer, may be able to take part of this benefit from the subsequent insurer by negotiating a lower premium. When this is possible, insureds have an incentive to switch insurers, or to renegotiate with their original insurers by threatening to switch, strategically. In the United States, because insureds switch insurers, strategically or not, on average once every three years,[3] insurers, when they can, choose not to cover treatments that are efficient

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[1] *See* Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968). For example, when ranchers graze their cows in a common pasture, part of the cost of any individual rancher's grazing (in terms of grass consumption) is borne by the other ranchers, so each individual rancher has an incentive to over-graze. The result can be worse for everyone than a situation in which each rancher grazes his cows less, but the grass is not depleted.

[2] Presidential candidate Hillary Clinton has made fixing this problem a centerpiece of her health insurance proposals:

> The insurance companies will actually tell you they don't want to pay for preventive health care because the patient might change insurance companies, and the original company won't get the benefits of the money they invested. But if a patient's doctor tells them that a foot needs to be amputated, well the company is kind of stuck with that. Talk about a system that is upside down and backwards.
>
> We clearly need a new approach. We know we can save money if we give insurance companies incentives to cover preventive care and wellness services, and my plan will do exactly that.

Hillary Clinton, Remarks on Reducing the Cost of Health Care (May 24, 2007).

[3] *See* Louis F. Martin et al., *Cost-Benefit Analysis for the Treatment of Severe Obesity*, 22 WORLD J. SURG. 1008, 1012 (1998). ("[T]he average U.S. citizen currently remains with the same medical insurance company less than three continuous years.").

only over more than three years. An insurer will choose to cover a treatment only when it expects that treatment to pay for itself within, at most, three years.

This is inefficient and socially irrational. By inducing insurers to cover prospectively efficient treatments, society could achieve the same or a higher level of health while also reducing total medical expenses. Insurers' failure to cover such treatments is an example of the well-known tragedy of the commons, only with a commons composed of human beings. Each insurer invests too little in improving the commons—in making insureds healthier by covering prospectively efficient treatments—because each insurer must share the benefit of such improvements with all the other insurers to whom an insured might switch. While this tragedy of the human commons is undesirable because inefficient, it is an even more important problem from perspectives other than maximizing economic efficiency. Health, the good at stake, is, after all, a precondition to almost everything else that people take to be valuable.

Insurers' failure to cover bariatric surgery as a treatment for morbid obesity demonstrates the seriousness of this problem. About fifteen million Americans are morbidly obese. Morbid obesity is associated with heart disease, certain types of cancer, type 2 diabetes, stroke, arthritis, breathing problems, and psychological disorders such as depression.[4] In 2002, its direct medical costs reached $93 billion. Bariatric surgery is the only effective treatment for morbid obesity. It is also prospectively efficient in that it costs about $25,000 to perform and produces about $5,000 in benefits each year, including saved medical costs, increased productivity at work, and higher quality of life. But because bariatric surgery is not cost-effective within three years, many insurers do not cover it. And because treating the diabetes in which morbid obesity often results and that it often exacerbates is lucrative for internists, they have incentives to block proposals to mandate coverage of bariatric surgery in the NIH and state legislatures. Despite sustained attention from Congress, state governments, and the public over the past decade, no fix is in sight.

We propose a mandatory-membership clearinghouse among insurers as the best solution to insurers' failure to cover prospectively efficient treatments. Insurers choose not to cover such treatments because they do not benefit from that part of the reduction in claims that an insured makes as a result of the treatment that accrues after the insured switches insurers. If insurers were to receive compensation for this loss whenever an insured who has received a prospectively efficient

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[4] *See* Centers for Disease Control, Overweight and Obesity, http://www.cdc.gov/nccdphp/dnpa/obesity/.

treatment switches to a different insurer, then this incentive not to cover prospectively efficient treatments would disappear. Through the clearinghouse we propose, insurers would decide on and make transfer payments to each other that would induce each of them to cover prospectively efficient treatments. All insurers would be required to be members of the clearinghouse and would decide on schedules of transfer payments applicable to particular treatments for insureds with particular characteristics by vote. Then, whenever an insured switches insurers after having received a treatment covered by an adopted schedule, the subsequent insurer would pay the original insurer the scheduled amount. It is possible to select voting rules for the clearinghouse under which the insurers will tend to adopt transfer-payment schedules that induce them to cover treatments if and only if doing so is prospectively efficient. Mainly, such voting rules must require a concurrent majority of insurers with net inflows of patients and insurers with net outflows of patients covered by a proposed schedule and make it difficult to trade votes across decisions, for example, by disenfranchising insurers with small stakes in particular decisions and penalizing vote buying.

This clearinghouse is politically feasible. Because the treatments that insurers would be induced to cover by the clearinghouse are prospectively efficient, the clearinghouse will make each insurer better off, even after taking the necessary transfer payments into account. And because the clearinghouse applies to treatments generally, it will be unclear to medical-industry lobbyists whether the clearinghouse helps them or hurts them. Internists may lose when insurers begin fighting diabetes by covering bariatric surgery, but win when insurers start covering a different prospectively efficient treatment in the future. Nor are there strong ideological objections, since the clearinghouse does not move strongly toward privatization or public provision of healthcare and does not challenge the basic feature of American health insurance that, for most people, it is obtained through and its terms are negotiated by their employers or the government. The only new rule of law that the clearinghouse requires is that insurers must be members and must abide by its decisions—decisions arrived at by the insurers themselves, not by a new government bureaucracy. And the clearinghouse is not unprecedented, since it resembles, in broad outline, existing intellectual-property clearinghouses, such as the Copyright Clearance Center.[5] In a

[5] *See generally* A.F. SPILHAUS, THE COPYRIGHT CLEARANCE CENTER (1978); PAUL GOLDSTEIN, COPYRIGHT'S HIGHWAY: FROM GUTENBERG TO THE CELESTIAL JUKEBOX (2003). Publishers and users of copyrighted material register with the Copyright Clearance Center. Then, under its Annual Authorized Service system, the Center "audit[s] each user's photocopying activities on the user's premises and convert[s] the results of the audit to a statistical model that account[s] for the number of times the user copied the works of individual publishers." *Id*. at

political sense, the clearinghouse is the minimum change to the existing system that would cure the problem of insurers' failure to cover prospectively efficient treatments—a problem with a $93 billion price tag in the case of bariatric surgery alone.

Tragedy of the commons has, of course, been widely discussed, not only in law, but also in economics, anthropology, and the other social sciences.[6] It has been used to understand issues ranging from air and water pollution controls to managing fishery stocks to governance regimes for the internet.[7] The anthropological work—documenting examples of commons-management systems that have worked well for centuries, ranging, for example, from grazing and forest institutions in Switzerland and Japan to irrigation systems in Spain and the Philippines—has demonstrated that successful solutions to tragedy of the commons require a close fitting of rules to the circumstances of the common resource and its users.[8] This is all the more true when the commons in question is composed of human beings, that is, when tragedy of the commons is tragedy of the human commons.

Surprisingly, very little has been written about tragedy of the human commons. Tragedy of the human commons occurs not only in the context of health insurance, but whenever the benefits of improvements to a human population are shared by other humans. For example, there is a tragedy of the human commons in workplace education in that each employer's investments in educating employees benefit not only that employer, but also other employers for whom the educated employees later work.[9] Thus, in industries where employees switch employers frequently and cannot pay for their own education, there will be underinvestment in education. Our analysis of insurers' failure to cover prospectively efficient treatments is a first step toward understanding and solving tragedy of the human commons in general.

Three features of tragedy of the human commons make it more

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206. Based on the statistical model, the Center extrapolates how much to charge each user and how much to pay each publisher. The Center currently "manages the rights to over 1.75 million works and represents more than 9,600 publishers" under this system. *Id.*

6 MANAGING THE COMMONS (John A. Baden & Douglas S. Noonan eds., 2d ed. 1998).

7 *See* Daniel McFadden, *The Tragedy of the Commons: A Nobel Laureate's Warning on the Net's Shared Resources*, FORBES, Sept. 10, 2001, *available at* http://members.forbes.com/asap/2001/0910/061.html.

8 *See* Elinor Ostrom, *The Rudiments of a Theory of the Origins, Survival, and Performance of Common-Property Institutions*, *in* MAKING THE COMMONS WORK: THEORY, PRACTICE AND Policy 293 (Daniel W. Bromley ed., 1992); ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION (1990).

9 As Gary Becker has argued, employers underinvest in workplace education that makes employees more productive in the long-run because employees switch employers regularly or strategically. Gary Becker, *Investment in Human Capital: A Theoretical Analysis*, 70 J. POL. ECON. 9, 13 (1962) (discussing situation of collective myopia in providing general training without describing it as a situation of collective myopia).

complicated to solve than ordinary tragedy of the commons. First, when the commons is composed of human beings, the welfare of the commons counts in addition to the welfare of the users of the commons in deciding what outcome is socially best. It is as if, in the classic examples of villagers grazing their cows in a common pasture, the welfare of the pasture counted in addition to the welfare of the villagers. Second, when the commons is composed of human beings, the commons can behave strategically. As soon as a morbidly obese patient receives bariatric surgery, she should be able to switch insurers and receive a lower premium for the same coverage, since the bariatric surgery will have reduced her expected claims.[10] Similarly, a morbidly obese employee who undergoes bariatric surgery should be able to switch to another employer and negotiate a higher wage, since bariatric surgery reduces absenteeism and increases productivity. This strategic behavior means that users of the commons who invest—insurers who cover prospectively efficient treatments—can expect to enjoy even less of the benefit of that investment and are therefore even less likely to invest in the first place. Third, because human beings interact with, contract with, and are related to other human beings, there are likely to be third parties, not usefully thought of as users of the human commons, who are affected by the users' investment decisions. Employers who benefit from healthier employees' increased productivity are one such class of third-party beneficiaries. Insureds' families are another. Because the users of the commons enjoy no part of the "same-time externalities" that flow to these third parties, they are even more likely to underinvest, as measured from a social perspective that includes these externalities in deciding what outcome is socially best.[11]

The strategic behavior of the humans in a human commons also makes new solutions available. One type of solution to tragedy of the commons adjusts the incentives of the users of the commons through tort, contract, or property rules so that they take into account the full social cost and benefit of their behavior. In ordinary tragedy of the

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[10] In practice, such renegotiation is unlikely in the health insurance context since most health insurance is group insurance, the premiums for which are fixed with reference to a pool of insureds, such as an employer's workforce, rather than with reference to insureds individually. But the essential point that renegotiation leads to same-time externalities remains apt because employers can renegotiate group rates. If a pool of insureds becomes healthier, as it does when an efficient medical treatment like bariatric surgery is applied to members of it, the premium charged to insure the pool's health should decrease.

[11] This problem is more severe in some areas than in others. The evidence suggests, for example, that employers capture much more of the benefit of general training than one might expect: "[T]he effect of an hour of training on productivity growth is about five times as large as the effect on wage growth." Mark A. Loewenstein & James R. Spletzer, *Dividing the Costs and Returns to General Training*, 16 J. LABOR ECON. 142, 142 (1998) (collecting citations to empirical studies).

commons, this kind of incentive adjustment cannot be applied to the commons because the commons—for example, a pasture—does not behave strategically. When the commons is composed of humans, incentive adjustments can be applied not only to users of the commons but to the commons itself. For example, a different solution to tragedy of the human commons in health insurance would be to require insureds (rather than subsequent insurers) to compensate their original insurers when they switch after having received a prospectively efficient treatment. Such a system would allow insureds to act as a kind of bridge in time between insurers, allowing the original insurer to bargain implicitly with the subsequent insurer without knowing, at the time, which insurer that will be. The original insurer would create an obligation on the part of the insured to repay the costs of the treatment not yet recovered upon switching, and, when the insured switches, the subsequent insurer would discharge this obligation to facilitate the switch. This kind of implicit bargaining evades the collective-action problem involved in agreements between the insurers made at the time the original insurer decides whether to cover a treatment.

I. INSURERS' FAILURE TO COVER PROSPECTIVELY EFFICIENT MEDICAL CARE IN THE STATUS QUO

Under the existing system of insurance contracts and regulation, when an insured switches insurers after having received a treatment that produces benefits for many years after it is received, the subsequent insurer need not pay the original insurer anything. Thus, the original insurer bears the full cost of any treatment that it covers, but enjoys, at most, only that part of the benefit of the treatment that accrues while the insured remains a customer. This divergence between the private value to insurers of prospectively efficient treatments, which is negative whenever it takes more than three years for a treatment to become cost-effective, and the social value of those treatments, which is positive so long as a treatment eventually becomes cost-effective, is what causes insurers not to cover prospectively efficient preventive care. When none of the insurers cover an efficient treatment we fall into the tragedy of the commons, and since the commons here are made up of humans we fall into the special case of the tragedy of the human commons. The case of bariatric surgery makes the general problem clear.

A. *Bariatric Surgery: A Case Study*

Morbid obesity is a serious and growing problem.[12] In the United States, about fifteen million people are morbidly obese.[13] A person is morbidly obese if her body mass index is greater than forty kg/m,[2] which translates into being about 100 pounds overweight.[14] The proportion of morbidly obese people in the population has been increasing at an increasing rate: in 1986, one person in every 200 was morbidly obese; in 2000, one in fifty; in 2002, one in twenty.[15] Morbid obesity is associated with heart disease, certain types of cancer, type 2 diabetes, stroke, arthritis, breathing problems, and psychological disorders such as depression.[16] It is responsible for a sharp rise in disability rates among adults under sixty over the last two decades.[17] And it reduces life expectancy by about two years.[18] Indeed, because of obesity-related health problems, today's youth may be the first generation to have a lower expected lifespan than their parents.[19]

Morbid obesity is also expensive. Direct medical expenses related to morbid obesity accounted for 5.5% of medical expenditures, or $63.2 billion in 2004,[20] of which Medicaid and Medicare paid about half.[21] The total economic cost of morbid obesity is almost double this amount and includes indirect costs such as lost income, restricted activity, and

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[12] *See generally* Elizabeth Benjamin, *Public Health Approaches to Obesity: Litigation, Legislation, and Lessons Learned*, 1 PITT. J. ENVT'L & PUB. HEALTH L. 127, 130-34 (2006) (reviewing evidence on the incidence and cost of obesity).

[13] *See* Roland Sturm, *Increases in Clinically Severe Obesity in the United States, 1986-2000*, 163 ARCH. INTERN. MED. 2146 (2003).

[14] American Obesity Association, AOA Fact Sheet, *available at* http://www.obesity.org/?subs/?fastfacts/?morbidobesity.?shtml; *see also* Medline Plus, Medical Encyclopedia, http://0-www.nlm.nih.gov.catalog.llu.edu/medlineplus/ency/article/003102.htm. A person's body mass index is equal to her weight in pounds divided by the square of her height in inches, then multiplied by 704.5 (to convert from kg/m^2). For example, to be morbidly obese, a person who is 5'10" must weigh 279 pounds, while a person who is 6'0" must weigh 294 pounds.

[15] *See* Sturm, *supra* note 13.

[16] *See* Centers for Disease Control, *supra* note 4.

[17] *See* Darius N. Lakdawalla, Jayanta Bhattacharya & Dana P. Goldman, *Are The Young Becoming More Disabled?*, 23 HEALTH AFF. 168 (2004); Benjamin, *supra* note 12, at 131.

[18] *See* Roland Sturm, *The Effects of Obesity, Smoking and Drinking on Medical Problems and Costs*, 21 HEALTH AFF. 245 (2002). Obesity is responsible for about 300,000 deaths per year; David B. Allison et al., *Annual Deaths Attributable to Obesity in the United States*, 282 J. AM. MED. ASS'N. 1530 (1999).

[19] S. Jay Olshansky et al., *A Potential Decline in Life Expectancy in the United States in the 21st Century*, 352 N. ENG. J. MED. 1138 (2005).

[20] *See Anne M.* Wolf & Graham A. Colditz, *Current Estimates of the Economic Cost of Obesity in the United States*, 6 OBESITY RES. 97 (1998); Eric A. Finkelstein et al., *National Medical Spending Attributable to Overweight and Obesity: How Much, and Who's Paying?*, 23 HEALTH AFF. 219 (2003).

[21] *See* Finkelstein et al., *supra* note 20. People covered by Medicaid and Medicare require the largest obesity-related expenditures: the elderly, because the treatments they require are more costly; and the poor, because they are more likely to engage in activities that complicate obesity treatment, like smoking and drinking. *Id.*

absenteeism. The Office of the Surgeon General estimated the total economic cost of morbid obesity at $117 billion in 2000.[22] Others have estimated it at $132 billion in 2002.[23]

The problem of morbid obesity has attracted attention at all levels of government. At least twelve bills addressing obesity have been introduced in the 110th Congress, which convened on January 4, 2007.[24] The bills propose congressional findings of fact about the costs

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[22] United States Department of Health & Human Services, Overweight and Obesity at a Glance, http://www.surgeongeneral.gov/topics/obesity/calltoaction/fact_glance.htm (last visited Sept. 26, 2007).

[23] *See* Paul Hogan et al., *Economic Costs of Diabetes in the U.S. in 2002*, 26 DIABETES CARE 917 (2003).

[24] A Library of Congress THOMAS search for "obesity" on April 3, 2007, with results revealed by inspection to be irrelevant removed by hand, reveals the following bills: Medicaid Obesity Treatment Act of 2007, H.R. 426, 110th Cong. (2007) ("requiring Medicaid drug coverage to include coverage of medically necessary obesity drugs"); Stop Obesity in Schools Act of 2007, H.R. 1163, 110th Cong. (2007) (mandating a "national strategy to reduce childhood obesity" that shall, among other things, "provide for the reduction of childhood obesity rates by 10 percent by the year 2011"); Health Promotion FIRST Act, S. 866, 110th Cong. § 2 (2007) (congressional findings that "[t]he United States is experiencing epidemics in diabetes and obesity among adults and children, at the same time a majority of the population is sedentary and eats an unhealthy diet" and that, "[n]ational costs of obesity account for 9.1 percent of all medical costs, reaching $93,000,000 in 2002. Approximately 1/2 of these costs were paid by the Medicare and Medicaid programs."); Healthy Places Act of 2007, H.R. 398, 110th Cong. § 5 (2007) (authorizing grants "to address how the built environment impacts food availability and access and physical activity to promote healthy behaviors and lifestyles and reduce obesity and related co-morbidities"); Access to Affordable Healthcare Act, S. 158, 110th Cong. § 601 (2007) (providing for grants awarded by the Secretary of Health and Human Services to states to support "community partnerships" in, among other things, promoting "activities to reduce the primary risk factors for diseases, such as smoking, obesity, and sedentary lifestyles"); Improving Head Start Act of 2007, H.R. 1429, 110th Cong. § 20 (2007) ("Evaluation and Recommendations Regarding Obesity Prevention—The Secretary [of Health and Human Services] shall evaluate and publish regulations on the issue of and concerns related to preventing and reducing obesity in children who participate in Head Start programs and shall consult, at a minimum, with experts in child and maternal health, child development, child and family nutrition and physical education, to determine the effective methods by which Head Start agencies can help address childhood obesity. The regulations should include guidance on how Head Start agencies can incorporate, at a minimum, more physical activity and nutrition education into such programs related to preventing and reducing obesity. Not later than 1 year after the effective date of this subsection, the Secretary shall submit to the House Committee on Education and Labor and the Senate Committee on Health, Education, Labor and Pensions, a report containing such recommendations and the results of such evaluation."); Headstart for School Readiness Act, S. 556, 110th Cong. § 17 (2007) (reauthorizing the Head Start Act and amending it to, among other things, "provide activities that help ensure that Head Start programs have qualified staff who can promote prevention of childhood obesity by integrating into the programs developmentally appropriate research-based initiatives that stress the importance of physical activity and nutrition choices made by children and family, through daily classroom and family routines"); Arthritis Prevention, Cure, and Control Act of 2007, S. 626, 110th Cong. § 2(4) (2007) (congressional finding that increasing rates of obesity may lead to increasing rates of osteoarthritis); Arthritis Prevention, Cure, and Control Act of 2007, H.R. 1283, 110th Cong. § 2(4) (2007) (same; House version); Child Nutrition Promotion and School Lunch Protection Act of 2007, S. 771, 110th Cong. §§ 2, 10 (2007); Child Nutrition Promotion and School Lunch Protection Act of 2007, H.R. 1363, 110th Cong. §§ 2, 10 (2007) (same; House version); GEDI Act, S. 907, 110th Cong. (2007)

of obesity and its connection with diseases such as diabetes and osteoarthritis, support exercise and dietary change as ways of preventing and reducing obesity, provide for grants to study the causes of and possible responses to obesity, expand Medicaid drug coverage to include antiobesity drugs, and call for "a national strategy" to reduce childhood obesity, including reducing the rate of childhood obesity by ten percent by 2011.[25] The federal obesity-related bill that has come closest to passing is the so-called Cheeseburger Bill, which would have abolished common law liability arising out of the consumption of food and nonalcoholic beverages.[26] It was passed by the House in the 108th and 109th Congresses and, each time, died while calendared in the Senate. Meanwhile, in 1999, the Center for Disease Control and Prevention founded the Nutrition and Physical Activity Program to Combat Obesity and Other Chronic Diseases, which funds state antiobesity programs;[27] in 2001, the Surgeon General issued a Call to Action on obesity,[28] and in 2003, the National Institutes of Health formed an Obesity Research Task Force.[29]

At least four states—Georgia, Indiana, Maryland, and Virginia—have passed legislation mandating insurance coverage of obesity treatment.[30] At least twelve states have introduced menu-labeling bills

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(obesity and gestational diabetes); GEDI Act, H.R. 1544, 110th Cong. (2007) (same; House version); High School Athletics Accountability Act of 2007, H.R. 901 § 2 (2007) (congressional finding that "providing opportunities to play sports in school is one key way to combat the rising rates of childhood obesity, which is caused in large part by physical inactivity"); Strengthening Physical Education Act of 2007, H.R. 1224, 110th Cong. § 3 (2007) (congressional finding that "[o]besity-related diseases cost the United States economy more than $100,000,000,000 every year").

[25] *See supra* note 24.

[26] *See* Personal Responsibility in Food Consumption Act, H.R. 339, 108th Cong. (2003); Personal Responsibility in Food Consumption Act of 2005, H.R. 554, 109th Cong. (2004). The Acts are differently worded, but both aim to abolish common-law liability, as opposed to regulatory or statutory liability, arising out of food consumption.

[27] *See* CTRS. FOR DISEASE CONTROL & PREVENTION, IMPROVING NUTRITION, PHYSICAL ACTIVITY, AND OBESITY PREVENTION (2006), *available at* http://www.cdc.gov/nccdphp/dnpa/obesity/state_programs/pdf/NPAO_Performance_Report_2005.pdf.

[28] *See* U.S. DEP'T OF HEALTH & HUMAN SERVS., THE SURGEON GENERAL'S CALL TO ACTION TO PREVENT AND DECREASE OVERWEIGHT AND OBESITY (2001), *available at* http://www.surgeongeneral.gov/topics/obesity/calltoaction/CalltoAction.pdf. The Surgeon General periodically issues "Calls to Action on Public Health Issues." Other calls address topics such as underage drinking, the health of the disabled, and oral health.

[29] *See* U. S. DEP'T OF HEALTH AND HUMAN SERVS., STRATEGIC PLAN FOR NIH OBESITY RESEARCH (2004), *available at* http://www.obesityresearch.nih.gov/about/Obesity_EntireDocument.pdf.

[30] *See* Morbid Obesity Anti-Discrimination Act, GA. CODE ANN. § 33-24-59.7 (West 2007); IND. CODE ANN. §§ 27-8-14.1-4, 27-13-7-14.5 (West 2007); MD. CODE ANN., INS. § 15-839 (West 2007); VA. CODE ANN. § 38.2-3418.13 (West 2007); West Virginia, Louisiana, Illinois and Ohio have been considering it as well; Susan J. Alt, *Liability Insurance Premiums on Bariatric Surgery Soar*, 22(1) HEALTH CARE STRATEGIC MGMT. 1 (2004), *available at*

that require restaurants to label the nutritional value of the food sold.[31] Other states (e.g., Arkansas and Texas) have restricted the sale of soda and candy in schools. Twenty-five other states are considering following suit.[32] Recently, former President Bill Clinton helped to broker a deal with the top three beverage companies that secured their commitment to remove all sweetened drinks like soda and ice tea from school vending machines by 2009.[33]

For those already morbidly obese, bariatric surgery is believed by many to be the only effective treatment. Behavioral interventions like diet and exercise produce, at best, some short-term weight loss, but have no long-term effect.[34] Pharmaceutical therapy is also ineffective. A recent meta-analysis revealed that after 12 months various drugs helped patients lose three to four kg., whereas bariatric surgery helped patients lose forty kg.[35] Another meta-analysis concludes that "[t]here are currently no truly effective pharmaceutical agents to treat obesity."[36] And the American College of Physicians's April 2005 guidelines for treating obesity says, "[a]fter taking a weight loss drug for 6 to 12 months, patients lost about 11 lbs or less," whereas with bariatric surgery, "patients can lose 44 to 67 lbs and keep it off for up to 10 years."[37] Bariatric surgery is also cost efficient.[38] It costs about $25,000 to perform and generates about $5,000 in benefits per year after the surgery.

Nonetheless, many insurers fail to cover bariatric surgery, and the evidence is consistent with the view that the cause of this failure is the fact that insureds switch insurers too quickly, strategically or not, for

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http://www.findarticles.com/p/articles/mi_go1621/is_200401/ai_n6419063.

[31] *See* Alt, *supra* note 30. Concerning the forces that potentially drive those bills, see Benforado et al., *Broken Scales: Obesity and Justice in America*, 53 EMORY L.J., 1645, 1774 n.455 (2004).

[32] *See* Ceci Connolly, *Public Policy Targeting Obesity*, WASH. POST, Aug. 10, 2003, at A01.

[33] Marian Burros & Melanie Warner, *Bottlers Agree to a School Ban on Sweet Drinks*, N.Y. TIMES, May 4 2006, *available at* http://www.nytimes.com/2006/05/04/health/04soda.html?ex=1150257600&en=8bd6105afce3b72e&ei=5070, May 4 2006.

[34] *See, e.g.*, Robert W. Jeffery et al., *Strengthening Behavioral Interventions for Weight Loss: A Randomized Trial of Food Provision and Monetary Incentives,* 61 J. CONSULTING & CLINICAL PSYCHOL. 1038 (1993).

[35] *See* Zhaoping Li et al., *Meta-Analysis: Pharmacologic Treatment of Obesity*, 142 ANNALS INTERNAL MED. 532, 541-42 (2005); *see also* Buchwald et al., *Bariatric Surgery: A Systematic Review and Meta-Analysis*, 292 J. AM. MED. ASS'N, 1724, 1729-30.

[36] *See* Buchwald, *supra* note 35, at 1724.

[37] *Treating Obesity with Drugs and Surgery: A Clinical Practice Guideline from the American College of Physicians*, 142 ANNALS INTERNAL MED. I-55 (2005).

[38] We muster the empirical evidence that bariatric surgery is a prospectively efficient treatment for morbid obesity and that insurers are failing to cover it because of collective myopia in a separate paper. *See* Ronen Avraham, Collective Myopia in the Provision of Bariatric Surgery (working paper on file with author).

covering bariatric surgery to be cost-effective for any individual insurer. First, those insurers who cover bariatric surgery often do so with conditions that help select insureds who are less likely to switch insurers for a lower premium after the surgery. Some require insureds to document six months of alternative weight reduction efforts[39] or to have been at work for a year or two before being eligible for coverage.[40] Second, Medicare, which has a lower turnover rate than Medicaid[41] but is run by the same administrative body, the Centers for Medicare and Medicaid,[42] covers bariatric surgery, while Medicaid not necessarily,[43] and this is in spite of the fact that Medicare deals with much older people. Third, insurers with larger market share are more likely to cover bariatric surgery, including branches in different states of the same insurance company, because switches outside the insurer are less likely. For example, Blue Cross Blue Shield (BCBS) of

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[39] *See, e.g.*, Aetna, Clinical Policy Bulletin: Obesity Surgery No: 0157, http://www.aetna.com/cpb/medical/data/100_199/0157.html. Other examples of insurers' medical necessity criteria can be found at About Obesity, http://www.obesityhelp.com/morbidobesity/.

[40] *See* Michael Cryer, *Bariatric Surgery: An Employer Dilemma*, 3 PROMOTING HEALTHY WEIGHT LOSS THROUGH HEALTHY LIFESTYLES ISSUE BRIEF 21, Oct. 2004 (the issue brief is for National Business Group members).

[41] Medicaid is a joint federal and state program that helps with medical costs for some people with low incomes and limited resources. In each state, people may go in and out of Medicaid coverage depending on whether they are employed, as well as various other conditions. On average the turnover rate is between twenty and forty percent a year. For 1995 Medicaid enrollment statistics, see Monthly Enrollment versus Persons Ever Enrolled in Medicaid During 1995, http://aspe.hhs.gov/health/reports/welfareleavers/table%2010.htm. Medicare, in contrast, is a federal health insurance program for all people 65 years old and older. No matter which state the insured lives she will always be covered under Medicare. Given that average life expectancy is 75.5 years, Medicare knows it will recoup its investment. Indeed, starting in 2005, as part of the Medicare Modernization Act, Medicar started to offer a few other preventive care services such as diabetes screening tests and cardiovascular screening blood tests. *See* Medicare & You, www.medicare.gov/publications/pubs/pdf/10050.pdf. It is worth mentioning that there might be another reason, still consistent with the myopic theory, for why Medicare covers bariatric surgery whereas Medicaid does not. This has to do with the costs of obesity that Medicare faces versus the costs of obesity that Medicaid faces. Finkelstein et al. reports that annual obesity-related costs for Medicare population are $1,486 whereas annual obesity-related costs for Medicaid are only $864 (both in 1998 dollars). Thus, that relative savings for Medicare from bariatric surgery are not only guaranteed (due to no turnover) but also larger. Finkelstein et al., *supra* note 20, at W3-222.

[42] Centers for Medicare and Medicaid Services, http://www.cms.hhs.gov.

[43] Recently, CMS announced that it expanded coverage for BS, but it announced it only with respect to for Medicare patients. *See* http://www.cms.hhs.gov/apps/media/press/release.asp?Counter=1786. It should be noted, however, that states are free to provide coverage beyond the minimum standards guaranteed by the federal law governing Medicaid, and indeed some state have provided coverage for bariatric surgery at least in some cases of medical necessity. *See* http://www.healthlaw.org/library.cfm?fa=download&resourceID=81614&print; Aron Primack, *Future of Obesity and Disease Management in Health Care: The Government Perspective,* 10 OBESITY RES. 82s (Supp. 1 2002).

Massachusetts,[44] with a 39.5% market share, BCBS of North Carolina, with a 38% market share, and BCBS of Michigan, with a 47% market share, cover bariatric surgery, while BCBS of Florida,[45] with a 31% market share, and BCBS of Nebraska,[46] with a 31% market share, do not cover bariatric surgery. Taken together, these pieces of evidence suggest the U.S. health care system suffers from the tragedy of the human commons.

Insurers can decline to cover obesity treatments under their contracts because obesity is not classified as a "disease," but rather as a "condition," [47] therefore treatments for it cannot be "medical necessities," a classification that usually entails coverage. It is difficult to negotiate individual exceptions to insurance contracts because most such contracts provide for group insurance, so that the actual negotiator is the insured's employer, rather than the insured. Moreover, many insureds are judgment-proof for the amount necessary to finance bariatric surgery through special contracts with insurers. Finally, a strong interest group in general and the dominant interest in the National Institutes of Health are internists, who expect to lose revenue from diabetics who undergo bariatric surgery. They have incentives, and some have argued that they have mobilized to block proposed government mandates that insurers cover bariatric surgery.[48] Together,

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[44] For the market share, see http://www.gao.gov/new.items/d06155r.pdf. That BCBS Massachusetts covers bariatric surgery can be found at Louise Kertesz, *Health Insurance Plans Redesign Care to Confront "the Public Health Crisis of the 21st Century,"* AHIP COVERAGE, Jan.-Feb. 2006, *available at* http://www.ahip.org/content/default.aspx?bc=31|130|136|14972|14973.

[45] *See* http://www.gao.gov/new.items/d06155r.pdf.

[46] *See* Cryer, *supra* note 40 (BCBS Nebraska does not cover bariatric surgery); The Value of Blue, http://www.bcbsne.com/valueblue/default.asp ("Nearly 550,000 people carry a Blue Cross and Blue Shield of Nebraska I.D. card.").

[47] Whether obesity is a disease is still under debate. The World Health Organization, National Institutes of Health, Food and Drug Administration, Centers for Disease Control and Prevention, Federal Trade Commission, Social Security Administration and the Internal Revenue Service have all defined obesity as a disease. Yet, the American Medical Association has taken the view that obesity is a "complex disorder with a variety of comorbid conditions." Joel D Hyatt, *Future of Obesity and Chronic-Disease Management in Health Care: The HMO Perspective*, 10 OBESITY RES. 79s (2002). The Health Care Financing Administration, which administers Medicaid, until recently did not recognize obesity as a disease, but will cover obesity when it causes other medical problems (it therefore covers surgery for morbid obesity). *See* Primack, *supra* note 43. Yet, effective October 1, 2004, Medicare has erased the sentence "Obesity itself cannot be considered an illness" from its guidelines. However, this did not directly affect current Medicare coverage. *See* Dep't of Health & Human Services, Pub 100-03, Transmittal 23 (Oct. 1, 2004), *available at* http://www.cms.hhs.gov/transmittals/downloads/R23NCD.pdf. Whether or not to cover bariatric surgery is currently under review. *See* U.S. Dep't of Health & Human Servs., Documents, http://www.cms.hhs.gov/mcd/viewnca.asp?from=basket&nca_id=160&basket=nca:00250R:160:Bariatric+Surgery+for+the+Treatment+of+Morbid+Obesity:Open:1st+Recon:4.

[48] See *infra* note 68 and accompanying text.

these facts explain why insurers have failed to cover bariatric surgery and why that failure has gone unaddressed despite the gravity of the morbid obesity problem.

But bariatric surgery is just one example of insurers' failure to cover prospectively efficient treatments. A similar confluence of insureds switching insurers frequently, high transaction costs of individualized contracts, and medical-industry lobbying explain insurers' failure to cover other prospectively efficient treatments. What we need is a system under which an insurer who covers a prospectively efficient treatment can expect to receive at least enough back to cover the cost of that treatment, and a way to identify the treatments to which this system should apply.

II. SOLUTIONS

In this part, we describe several less desirable solutions to insurers' failure to cover prospectively efficient treatments, then outline our proposal for a mandatory-membership clearinghouse among insurers. Before doing so, some general observations about the characteristics of desirable solutions may be helpful. First, insurers have private information about the costs and benefits of treatments because they collect this information in the ordinary course of business to make coverage decisions and have a financial incentive to do this well. It is difficult for the government, whether an administrative body[49] or a court,[50] to verify this information without a larger, better-incentivized staff than such an agency would realistically have. This makes solutions that require the government to have information about the costs and benefits of treatments—for example, government coverage mandates[51] or private law tort or property rules[52]—less desirable than those that do not, like facilitating collective action.[53] Second, government decisionmaking in health care is afflicted by serious public choice problems because doctors and other health care providers have a strong incentive to lobby and have in fact lobbied in their own economic interest rather than necessarily according to the best medical judgment. This also makes governmental solutions undesirable, although more so with respect to administrative solutions than with respect to judicial ones. Third, many insureds are judgment proof. This

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[49] *See infra* Part III.B.1.

[50] *See infra* Part III.B.2.

[51] *See infra* Part III.B.1-2 (administrative mandates and injunctions to cover).

[52] *See infra* Part III.B.3-5 (damages for switching, lock-in contracts, and rebates).

[53] An exception to this generalization may exist where Medicaid or Medicare are involved.

makes solutions that require insureds to contract with insurers for coverage[54] or that depend on transfers from them exacted in tort[55] infeasible. Fourth, most insurance is group insurance. This also makes contractual solutions between insureds and insurers[56] difficult since they often must bargain through an intermediary, usually an employer. Fifth, competition among insurers is valuable for the ordinary reasons that competition in providing any service is valuable. This makes solutions that lock insureds into particular insurers[57] undesirable since insurers face less competitive pressure with respect to locked-in insureds. Sixth, health treatments that once were inefficient may become efficient, ones that were efficient may become inefficient, and wholly new improvements may be invented. The rate at which this happens and the size of the impact of the changes on what is socially desirable affect how important it is that a solution be flexible in the improvements in which it induces investment. Private contracts might be thought to adjust quite quickly, but if the contracts are mostly group contracts, as in the case of health insurance, adjustment in them may come quite slowly. Similarly, the speed at which administrative mandates adjust depends on the particular governmental process used to generate them. Seventh, a final consideration is the cost of carrying out a solution, which is usually called administrative cost for a governmental solution and transaction cost for a private solution. One general factor is the frequency of the transactions: setting up an elaborate governmental process, such as a clearinghouse, for investments that happen once every few years is likely to be less efficient than setting up such a process for investments that happen many times per day, since the fixed cost of the process can be allocated over more investments. This is particularly true if there are economies of scale in processing investments, for example, if information gained in evaluating one set of investments is useful in evaluating others.

A. *Less Desirable Solutions*

1. Administratively Mandated Coverage

One way to solve collective myopia is by having government mandate coverage of prospectively efficient medical treatments such as

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54 *See infra* Part III.B.4-5.
55 *See infra* Part III.B.3.
56 *See infra* Part III.B.4-5.
57 *See infra* Part III.B.4-5.

bariatric surgery.[58] There are already thousands of state-mandated coverage provisions in the United States, and mandates are the dominant solution in Europe and Canada. For example, forty-six state legislatures have mandated that health insurers cover supplies, services, medication, and equipment for diabetes (which is usually manifested in morbidly obese people) as part of their basic coverage, without increasing premiums.[59] Georgia, Indiana, Maryland, and Virginia have mandated coverage for obesity treatments, and Louisiana, Illinois, and Ohio are considering doing the same.[60] Insurers who already cover a certain treatment will support mandatory coverage of it because they cover it regardless of the mandate, therefore, the mandate costs nothing and gains them the value of the resulting inflows of healthier insureds. It also prevents employees from strategically switching to the covering insurers, or to the employers to whom they provide group coverage, in order to get the coverage.[61]

There are at least three problems with administrative mandates. First, most of the existing mandates are state-level mandates, but state-level mandates affect only about fifty percent of insureds because ERISA preempts state-level mandates for self-insured employers.[62] This could be solved by a federal mandate or by a federal change to ERISA. Second, administrative mandates are likely to be inefficient because insurers have private information about the costs and benefits of treatments, particularly newly developed or improved treatments. No government agency has the time, resources, will, or personnel to perform a detailed study of the thousands of proposed mandates that make their way to state legislatures each year.[63] Insurers are in a better position and have better incentives to determine what treatments are

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[58] Another solution is national health insurance. We set this proposal aside because it has already been widely discussed and is well understood. Among the downsides of national health insurance are that it eliminates competition, product variety and flexibility. Some of the solutions we propose—in particular, the clearinghouse, which is the solution we endorse—can be regarded as a form of selective nationalization. Private information and public-choice problems of the sort discussed in the text provide a reason for not going all the way.

[59] Jonathan Klick & Thomas Stratmann, A Micro Analysis of the Effect of Insurance Mandates on the Behavior of Diabetics: Education vs. Moral Hazard (2003) (unpublished manuscript, on file with authors).

[60] Georgia, Indiana, Maryland, and Virginia have such mandates. West Virginia, Louisiana, Illinois and Ohio have been considering it as well. *See supra* note 30 and accompanying text. In contrast, Iowa has explicitly restricted insurance coverage for *treatment* of obesity. IOWA ADMIN. CODE r. 191-75.10(513C) (2007).

[61] Mark Pauly, Howard Kunreuther & Richard Hirth, *Guaranteed Renewability in Insurance*, 10 J. RISK & UNCERTAINTY 154 (1995).

[62] *See* Employee Retirement Income Security Act of 1974, 29 U.S.C.S. § 1144(b)(2)(B) (LexisNexis 2007).

[63] Indeed, one may argue that the current states' mandates for diabetes treatments, which do not include bariatric surgeries, the more efficient cure, prove this point. The strong diabetes lobby was able to secure coverage mandates, perhaps to their own long-term detriment.

socially desirable because they use this information in making coverage decisions in the ordinary course of business. Success here is what keeps actuaries off the streets. A partial remedy to this private-information problem is to allow insurers to lobby government for mandates, as the Noerr-Pennington doctrine allows them to do collectively, notwithstanding the antitrust laws.[64] Third, however, administrative decision-making in health insurance is subject to substantial public-choice problems because there are strong interest groups who would oppose efficient mandates and favor inefficient ones, and also interest groups in other areas who are good at distracting legislatures from actually pressing issues, like healthcare.[65] A recent study of state coverage mandates concludes that, "[t]here is no particular logic or pattern to the mandated benefits . . . , other than that they address the restrictions in coverage that have arisen most recently."[66] Internists in the NIH, for example, might have mobilized to oppose mandates of bariatric surgery for fear of losing revenue from cured diabetics.[67] It is well known and empirically documented that physicians in general lobby in their own interest[68] and make treatment decisions based in part on the economic and non-economic consequences to them rather than solely on the medical consequences for patients.[69] Indeed, federal and

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64 E. R.R. Presidents Conference v. Noerr Motor Freight, Inc., 365 U.S. 127 (1961); United Mine Workers v. Pennington, 381 U.S. 657 (1965). Moreover, while obviously it is hard to provide evidence, it is widely believed among antitrust scholars that the Department of Justice does not monitor this type of behavior even if it deviates from the written case law.

65 *See* Frank A. Sloan & Mark A. Hall, *Market Failures and the Evolution of State Regulation of Managed Care*, 65 LAW & CONTEMP. PROBS. 169, 195 (2002) (arguing that state mandates may "respond only to private interests of providers or advocacy groups").

66 *Id*. at 195.

67 Against surgeons' accusations that internists frustrate the provision of bariatric surgeries, internists might argue that surgeons risk their patients' health with scientifically unfounded treatments for their own self-interest. Bruce Agnew, *Decisions, Decisions: NIH's Disease-By-Disease Allocations Draw New Fire*, SCIENTIST, Mar. 30, 1998, at 12[7]:1, *available at* http://www.the-scientist.com/article/display/17969/.

68 An example in the context of bariatric surgeries is a study on the cost and benefits of the treatment of obesity where the authors (a group of informed researchers-physicians) explicitly admitted that "physician groups will be fighting among themselves to keep reimbursements rates for the specialist services as high as possible." Louis F. Martin et al., *Cost-Benefit Analysis for the Treatment of Severe Obesity*, 22 WORLD J. SURG. 1008 (1998). Other examples are at hand. For years surgeons tried to prevent chiropractors from getting licenses despite the medical evidence about the effectiveness of such treatments. *See* Wilk v. Am. Med. Ass'n, 895 F.2d 352 (1990) (finding that national medical association had engaged in illegal restraint of trade for which injunctive relief was warranted).

69 Consider for example what Dr. David Hillis, an interventional cardiologist at the University of Texas Southwestern Medical Center in Dallas, explains:

> If you're an invasive cardiologist and Joe Smith, the local internist, is sending you patients, and if you tell them they don't need the procedure, pretty soon Joe Smith doesn't send patients anymore. Sometimes you can talk yourself into doing it even though in your heart of hearts you don't think it's right.

state anti-kickback statutes (known as the Stark Law) prohibiting self-interested referrals and other self-interested conduct by doctors have been out there for decades.[70] In the presence of these large and organized interest groups, it is unlikely that administrative mandates would systematically result in and only in socially desirable mandates.

2. Injunctions to Cover

If courts can identify through the adversary process prospectively efficient treatments, then they can enjoin insurers to cover them. Allowing such injunctions would require legislation to create a new tort, "denial of coverage." Insurers who want inflows of healthier patients or insureds who want a treatment to be covered (more probably, classes of such insureds) would be willing to act as plaintiffs. Restricting the class of plaintiffs to insurers (effectively ignoring that the commons are made up of humans) is desirable since they are more sophisticated and are likely to have more information about the costs and benefits of treatments, and hence are less likely to bring losing claims. Moreover, restricting the class of plaintiff-insurers to insurers who already cover the treatment is desirable since this is evidence that the insurer thinks the treatment is efficient. Insurers who don't cover the treatment might seek an injunction to cover an inefficient treatment only because they have net inflows. Even if the injunction served as a precedent for a reciprocal injunction against such an investor, it might want the injunction since the losses from covering its outflow might be more than offset by the gains from its inflow.

The main trouble with this proposal is that courts are unlikely to do well at identifying socially desirable treatments, for many of the same reasons that other branches of government are unlikely to do this well. Insurers have better staffs for collecting and analyzing information about treatments and better incentives to do so well and this private information will be difficult for a court to verify without a similar

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Gina Kolata, *New Heart Studies Question the Value of Opening Arteries*, N.Y. TIMES, Mar. 21, 2004. *See also* Lawton R. Burns, Stacie E. Geller, & Douglas R. Wholey, *The Effect of Physician Factors on the Cesarean Section Decision*, 33 MED. CARE 365 (1995) (showing that doctors are more likely to perform c-sections at convenient times such as on Fridays and between 6 a.m. and 6 p.m.). *See also* Jonathan Gruber & Maria Owings, *Physician Financial Incentives and Cesarean Section Delivery*, 27 RAND J. ECON. 99 (1996) (arguing that the obgyns substitute from normal childbirth toward a more highly reimbursed alternative).

70 Most recent regulation for the Stark Law has been published on March 26, 2004, by the Centers for Medicare and Medicaid Services. Medicare Program; Physicians' Referrals to Health Care Entities With Which They Have Financial Relationships (Phase II), 69 Fed. Reg. 16,054 (Mar. 26, 2004), *available at* http://www.cms.hhs.gov/quarterlyproviderupdates/downloads/CMS1810IFC.pdf.

expert staff of its own. Judicial decision-making is probably an improvement over administrative decision-making, in that courts are generally less susceptible to pressure from interest groups like those involved in health insurance, although this may be less true of state courts, the members of which are often elected. Costs of litigation, even among sophisticated parties who anticipate likely rulings and make decisions in early stages of litigation accordingly, are also not negligible, although they are likely to be small relative to the costs of not covering treatments like bariatric surgery. Finally, it may be necessary to create a new tort through federal legislation or obtain a federal legislative exemption from ERISA[71] in order to avoid ERISA preemption. ERISA generally preempts states' ability to regulate private employer-sponsored health plans. For example, the Supreme Court ruled recently that ERISA preempts a denial-of-coverage claim brought by plaintiffs who were beneficiaries of an ERISA-regulated plan, but had sued under a Texas state-law cause of action.[72] Preemption may not apply to a denial-of-coverage suit *between* insurers, however; ERISA's language is not clear on whether preemption is limited to suits between plan beneficiaries and administrators, or includes suits between insurers too.[73] If state-level torts were preempted by ERISA, about 31% of employees would be unaffected by the reform.[74]

3. Damages for Switching

Judicially determined damage awards to an original insurer who covers a prospectively efficient treatment for an insured who then switches to a subsequent insurer could be a solution. These damages could come from either the insured (taking advantage of the fact that the commons is made up of humans) or the subsequent insurer. However, it would be better to require the suit to be against the subsequent insurer for the same reasons it was better in the injunction context to restrict plaintiffs to insurers; namely, that insurers are more sophisticated and

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71 There is only one precedent for a state (Hawaii) getting an exemption from ERISA. ERISA Preemption Primer 8, *available at* http://statecoverage.net/pdf/primer2000.pdf.

72 Aetna Health Inc. v. Juan Davila, 542 U.S. 200 (2004).

73 "A civil action may be brought (1) by a participant or beneficiary. . . (B) to recover benefits due to him under the terms of his plan, to enforce his rights under the terms of the plan, or to clarify his rights to future benefits under the terms of the plan . . . ." 29 U.S.C.A. § 1132(a) (West 2007).

74 About thirty-one percent of employees are covered by ERISA Self-Insured plans and forty one percent by ERISA Insured plans. About thirteen percent are state/local government employees, five percent federal employees, and the remaining ten percent are individually insured. See *ERISA* Preemption Primer, *supra* note 71, at 4.

better informed. To work, the damages would have to be no less than the cost of the treatment to the original insurer less the value of the healthier insured it enjoys before the insured switches and no more than the value of the healthier insured to the subsequent insurer. If damages are below this range, the tragedy will persist, although it will be lessened, and if damages are above this range, insureds will be unable to switch insurers, although the original insurer will make the correct investment decision.

Damages like those we propose here are used in some other contexts. One context that is like collective myopia is that in which an investor underinvests in risk reduction because it anticipates that the harm will eventually be borne by someone else. Under the free public services doctrine, a government generally may not recover from a tortfeasor the costs of public services occasioned by the tortfeasor's wrongdoing.[75] But the government can sometimes recover reasonable risk-reduction costs from an individual who creates a risk. For example, New Jersey imposes statutory liability for cleanup costs on those who discharge hazardous substances into waters within the state.[76] Similarly, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) allows parties that invest in efficient risk-reduction measures for sites containing hazardous material to file for restitution for the investments they made that benefited other liable parties. And in asbestos claims, some courts have approved building owners' causes of action seeking restitution from manufacturers for the "maintenance, removal and replacement" of asbestos.[77] Each of these examples can be understood as an attempt to induce investment in prospectively efficient risk-reduction measures.[78]

The main problem with this approach is, again, private information: courts are not likely to get the damage calculations correct; in particular, they are less likely to get these calculations correct than are the insurers themselves acting collectively under governance rules such as those we propose. However, as we noted above, for the efficient investment to occur it is enough for these damages to fall within a defined range that may be quite large.

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75 *See, e.g.*, 57 AM. JUR. 2D Municipal, County, School, and State Tort Liability § 136 (2006).

76 *See* Spill Compensation and Control Act, N.J. STAT. ANN. § 58:10-23.11 (West 2007).

77 *See, e.g.*, 80 S. Eighth St. Ltd. P'ship v. Carey-Canada, Inc., 486 N.W.2d 393, 398 (Minn. 1992); Northridge Co. v. W.R. Grace & Co., 471 N.W.2d 179 (Wis. 1991). *See also* Richard C. Ausness, *Tort Liability for Asbestos Removal Costs*, 73 OR. L. REV. 505 (1994).

78 For the development of similar ideas in different contexts, see Alon Harel & Assaf Jacob, *An Economic Rationale for the Legal Treatment of Omissions in Tort Law: The Principle of Salience*, 3 THEORETICAL INQ. L. 413, 448-49 (2002); Ehud Guttel, *The (Hidden) Risk of Opportunistic Precautions*, VA. L. REV. (forthcoming 2007).

4. Lock-In Contracts

Insurers could cover prospectively efficient treatments in exchange for a commitment from the insured to pay a penalty if she switches insurers during the period it takes for the insurer's investment in the treatment to become profitable. The penalty would be equal to the part of the investment not yet recovered. A major feature of this solution is that it takes advantage of the fact that the commons is made up of humans. Fish and water cannot subject themselves to such contract. One problem with this approach in the context of health care is that insureds often switch insurers for reasons not solely related to coverage in general and to coverage of the treatment in particular, for example, because they switch jobs, relocate, marry, or divorce, and lock-in contracts would attach a penalty to such decisions. This problem could be mitigated if insureds were able to contract with their subsequent insurer for reduced premiums, since the subsequent insurer will enjoy the health benefits that previously flowed to the original insurer. But because most health insurance is group insurance, insureds may have a hard time negotiating for these concessions. They may also have a hard time negotiating for increased wages. Indeed, lock-in contracts may be undesirable because of a first-mover problem: until insurers provide for receiving insureds subject to lock-in contracts by paying off the contract, lock-in contracts are very undesirable to insureds because they function as penalties on the decisions we described, so insurers do not offer them. But because insurers do not offer them, insurers never have a pressing reason to provide for receiving insureds subject to lock-in contracts. Another problem is that the cost of enforcing lock-in contracts through litigation is likely to be high since the relationships are with insureds, of which there are many, rather than with other insurers, of which there are relatively few.

5. Rebates

Another possible solution which is unique to the case where the commons is made up of humans is to have insureds pay for efficient treatments up front, but then receive rebates from insurers as the cost savings from those treatments accrue.[79] With respect to bariatric surgery, for example, insureds could pay $25,000 for the surgery up front, then in each of the following years the insurers could issue them a

[79] This is analogous to having employees pay up front for general training, which increases her productivity to other employers as well as to her present one, and then receive a higher wage thereafter. *See* Becker, *supra* note 9, at 13 (now a well-accepted result in labor economics).

$5,000 annual rebate (ignoring interest for simplicity). This is functionally the same as giving insureds who have undergone bariatric surgery a lower premium, and, when such lower premiums are possible, they are a handy way of making the rebates transferable across insurers. Rebates can be implemented in a variety of ways, some of which involve governmental action, while others depend on private contracting. On the governmental-action side, rebates could be administratively mandated or they could be the result of a new tort in which insureds who treat themselves sue insurers for the benefits of those treatments. Governmental solutions suffer from the same private-information and public-choice problems we discussed in the context of administrative mandates and injunctions to cover, so we will restrict attention here to private contractual rebates, where the insured and the original insurer contract for the original insurer to pay periodic rebates to the insured after it has paid for the treatment.

One problem with contractual rebates is that they are not transferable between insurers, so there is a lock-in effect. It would not do simply to mandate that rebates be transferable, since this would give insurers with net outflows an incentive to provide overly generous rebates, which might induce insureds to purchase effective but inefficient treatments. The lock-in effect problem is probably not that large, however, because it decreases with time, as more of the rebates are paid; it is difficult to treat locked-in insureds differently from other insureds because most health insurance is group health insurance; insurers want to develop reputations for good service, and potential insureds may not distinguish well between service to locked-in insureds and to other insureds, or may expect to become locked-in insureds themselves; and group insurers have an incentive the other way to be particularly solicitous of insureds who have undergone cost-saving treatments, since they become lower-cost members of the insured pool.

Another problem with rebates is judgment-proof insureds. Many of the morbidly obese patients for whom bariatric surgery is an efficient treatment, for example, are poor enough that they would be unable to muster the $25,000 cost of the surgery. One solution is to finance the surgery through contributions from others who benefit from it, such as life insurers, treatment providers, and suppliers of goods used in treatment. Life insurers benefit from treatments that increase an insured's life expectancy since they cannot update their premiums to reflect decreases in life expectancy. And there is at least anecdotal evidence of suppliers solving financing problems: after it was revealed that surgeons had difficulties getting malpractice insurance for bariatric surgery from commercial insurance companies, at least one manufacturer of bariatric-surgery equipment got involved in forming a

physician-owned insurance company (also called risk-retention-group) which provides liability insurance coverage to bariatric surgeons.[80] Another solution is a loan secured with the annual rebates. Yet another is government funding, although this raises the familiar private-information and public-choice problems. The best evidence that these solutions are not in fact feasible is the fact that we do not see them in the real world. A minor problem is that insurers may become insolvent. In the United States, however, due to its rich regulatory system, this risk is very remote.

The rebate solution has insureds paying an up-front cost and receiving the equivalent of a premium reduction as they remain with the insurer at the time particular treatments are performed. An alternative that has been discussed in the economics literature is having insureds pay an up-front cost at the outset, in higher premiums, and then be charged lower premiums later if they remain with the same insurer.[81] The initial higher premium could theoretically factor in the risk to the insurer that the insured will switch insurers after the insurer covers a prospectively efficient treatment like bariatric surgery. An immediate

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[80] Novus Insurance Company is a risk-retention-group (RRG) founded in June 2005 that provides liability insurance for bariatric surgeons. *See* Novus Insurance Company Risk Retention Group, http://www.novusrg.com. A RRG is essentially a liability insurance company owned by its members who are involved in similar activities that therefore represent similar liabilities. *See Risk Retention Groups Owning Up to Success*, INS. J., Jan. 27, 2003, *available at* http://www.insurancejournal.com/magazines/west/2003/01/27/coverstory/25737.htm. Why Novus is able to provide insurance where commercial insurance companies cannot? Novus's answer is that:

> [O]nly by thoroughly analyzing the true risks, can a complete understanding of the risks be achieved. Our research has revealed that risks perceived by the traditional insurers are overstated, particularly as to the severity of Bariatric Surgery claims. Unlike traditional insurers, Novus has undertaken to perform an initial in-depth evaluation of the risks associated with Bariatric Surgery, and more importantly, to develop systems and tools to reduce those risks.

Novus Insurance Company Risk Retention Group, Our View of Bariartric Surgery, http://www.novusrrg.com/our_view.htm. Interestingly, the funds to perform studies on Bariatric risk management came from Ethicon Endo-Surgery, Inc. *See* Novus Insurance Company Risk Retention Group, Our Partners, http://www.novusrrg.com/about.htm. Since 1995, Ethicon Endo-Surgery has been the market share leader in surgical stapling products for, among other things, gastric by-pass surgeries. *See* Ethicon Endo-Surgery, Inc., Innovative Products: Surgical Stabling Products, http://www.ethiconendo.com/dtcf/pages/surgical_stapling.htm?pgn=3.

[81] *See* Pauly, Kunreuther & Hirth, *supra* note 61, at 143. Cochrane offered to create an account into which insureds pay a constant amount each period and the account pays a premium (which is different from the amount the insureds paid) to the insurer for the one-period insurance. If a person is diagnosed with a long-term disease that raises his premium, the insurer pays into the account a lump-sum equal to the increase in the present value of future premiums. If he gets healthier so that his premiums decline, the account pays the insurer a lump sum equal to the decline in the present value of future premiums. J.H. Cochrane, *Time-Consistent Health Insurance*, J. POL. ECON., June 1995, 445-73. Dowd has offered an identical mechanism when analyzing preventative care. *See* Bryan E. Dowd, *Financing Preventive Care in HMOs: A Theoretical Analysis,* 19 INQUIRY 68, 76 (1982).

problem with this approach is that it requires insurers and insureds to calculate the expected costs and benefits of future treatments, including treatments not yet invented or improved so as to be efficient, and the likelihood of insureds switching at different times in the future, and to do this not only for one condition, but simultaneously for the full range of health problems an insured might encounter.[82] Also, unlike life insurance, which is sold for a lifetime, health insurance is sold annually. And there are good reasons for this.[83] Guaranteed renewability contracts are more attractive the longer the time horizon. But because many people are uncertain how long they will remain in a particular location or job, they may have good reasons to prefer annual health insurance over a long-term policy that would end when they move.[84] The same judgment-proof and lock-in considerations would also apply to this type of solution.

B. *Mandatory Clearinghouse with Coverage by Insurer Vote*

We think a mandatory-membership clearinghouse for insurers in which they would decide collectively on coverage mandates binding on all of them is the best solution to collective myopia in health insurance.

Clearinghouses are organizations that allow producers and consumers to overcome substantial transaction costs that would otherwise prevent them from doing business. The recording and publishing industries have benefited most from clearinghouses. Content clearinghouses enable artists and creators to avoid the very large transaction costs of tracking down and suing copyright infringers or

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[82] In a recent paper, Hendel and Lizzeri showed that a guaranteed renewability mechanism can work in life insurance. Igal Hendel & Alessandro Lizzeri, *The Role of Commitment in Dynamic Contracts: Evidence from Life Insurance*, 118 Q. J. ECON. 299, 299–327 (2003). But Cutler and Zeckhauser argue that such a mechanism is less likely to work in health insurance because of the complexities we identify. David M. Cutler & Richard J. Zeckhauser, *The Anatomy of Health Insurance*, *in* 1A HANDBOOK OF HEALTH ECONOMICS 563 (Anthony J. Culyer & Joseph P. Newhouse eds., 2000). Moreover, Pauly, Kunreuther and Hirth assume a world with full information, no moral hazard or adverse selection, and non-myopic insureds. *See* Pauly, Kunreuther & Hirth, *supra* note 61. Cutler and Zeckhauser argued that such insurance may create moral hazard problems (people will take inefficient care of their health), and adverse selection (people expecting a decline in their health are more likely to take up the premium insurance). Cutler & Zeckhauser, *supra*.

[83] Unlike life insurance, health insurance is less portable. When an insured leaves a geographical area she might need to change a provider who might well refuse to insure her at the old terms. Moreover, unlike life insurance where insureds only worry about the insurer solvency and exclusions, in health insurance insureds also worry about quality of care. Once insureds are stuck in lifetime health plans, insurers have no incentives to provide an advanced level of service. Lastly, future health costs are unpredictable and non-diversifiable, insurers do not like such risks. *See* Cutler & Zeckhauser, *supra* note 82, at 627.

[84] *See* Pauly, Kunreuther & Hirth, *supra* note 61, at 150.

negotiating royalty payments with each content consumer. Similarly, the clearinghouses allow users to purchase rights to large blocks of content without facing the transaction costs of determining who owns the rights to each song or piece of writing.[85] These transaction costs are

[85] In America, for example, Copyright Clearance Center, Inc. (CCC) provides licensing systems for the reproduction and distribution of copyrighted materials in print and electronic formats throughout the world. Similarly, BMI is an American performing rights organization that represents approximately 300,000 songwriters, composers and music publishers. It is a non-profit company, founded in 1939, which collects license fees on behalf of creators. The license fees BMI collects for the "public performances" of its repertoire of approximately 4.5 million compositions─including radio airplay, broadcast and cable television carriage, internet and live and recorded performances by all other users of music─are then distributed as royalties to the writers, composers and copyright holders it represents. *See* BMI, About, http://www.bmi.com/about/. The American Society of Composers, Authors and Publishers (ASCAP) is another membership association of over 240,000 U.S. composers, songwriters, lyricists, and music publishers of every kind of music. ASCAP protects the rights of its members by licensing and distributing royalties for the non-dramatic public performances of their copyrighted works. *See* ASCAP, About ASCAP, http://www.ascap.com/about/.

Analyzing the formation of the CCC provides a salient example of how clearinghouses can solve seemingly insurmountable market problems. In 1976 Congress passed an updated version of the U.S. Copyright law, which went into effect in 1978. *See* General Revision of Copyright Law, Pub. L. No. 94-553, 90 Stat. 2541 (1976). In the years leading up to the law's passage, scholarly journals and other publications began to see their profits being eroded by unauthorized photocopying. *See* A.F. SPILHAUS, JR., THE COPYRIGHT CLEARANCE CENTER (1978). The new law made it clear that permission of the copyright owner is needed by anyone reproducing short articles and other publications. To facilitate the collection of royalties generated by library copying, Congress recommended that workable clearance and licensing procedures be developed. The CCC was born from this Congressional recommendation in 1977. The CCC is a voluntary, non-profit organization that operates as a central clearinghouse for the payment of copyright license fees to authors. Publishers, authors and "user organizations" like "libraries, corporations, government agencies, and information services" register with the CCC. At first, the CCC employed a system called the Transactional Reporting System (TRS) where "[p]ublishers would print a legend at the bottom of the first page of their books indicating the fee to be paid for copies, and users would account for each copy made, periodically remitting the accumulated sums to the CCC for distribution to its members." GOLDSTEIN, *supra* note 5, at 205. However, the CCC experienced a serious problem with illegal underreporting. After signing up over seven hundred members, the CCC received reports from only fifty five. *Id.* In 1980, the CCC employed a more proactive approach called the Annual Authorized Service system (AAS). With this system, the CCC would "audit each user's photocopying activities on the user's premises and convert the results of the audit to a statistical model that accounted for the number of times the user copied the works of individual publishers." *Id.* at 206. Based on the statistical model, the CCC extrapolated how much in fees it should charge each users, and to which publishers the sums should be routed. The major court decision in *American Geophysical Union v. Texaco*, 802 F. Supp 1 (S.D.N.Y. 1992), that ruled that copying of scholarly journals did not fall under the "fair use" provision of copyright law, provided the "stick" that the CCC needed to cement and enforce its system. Currently, the CCC "manages the rights to over 1.75 million works and represents more than 9,600 publishers and hundreds of thousands of authors and other creators." Copyright Clearance Center, At ALA 2004 Conference: Copyright Clearance Center and OCLC Deliver Integrated Copyright Permission Service, http://www.copyright.com/ccc/viewPage.do?pageCode=au85.

Many valuable lessons can be learned by following the CCC's progression from its formation, through troubled times, and to its eventual success. First, the CCC emerged from an environment of "cooperate or perish." The serious threat that illegal copying posed to the industry's bottom line kept publishers negotiating through inevitable disagreement. Robert P.

analogous to the costs of bargaining between potential second insurers and original insurers in the health-insurance context.

The health-insurance clearinghouse we propose would promulgate mandates decided on collectively by the insurer–investors. And, since the commons is made up of humans who derive benefits from coverage and since we account for this benefit in the social welfare function, they too should have a vote in the clearinghouse. This could be achieved either through some governmental agency, such as the CMS, or in ways similar to the way external directors operate in the public firms.

Each mandate would specify the treatment that investors are required to provide—for example, bariatric surgery for morbidly obese patients—and the schedule of transfer payments to be made when an insured switches from one investor in the clearinghouse to another at various times.[86] The schedule might be, for example, monthly, quarterly, or annually, specifying payments for a switch after one, two, three, etc. months, quarters, or years. Payments could be made in real time as insureds switch insurers, or the clearinghouse could keep track of switches and then require the insurers to settle up periodically, for example, annually. Real-time payments may be advantageous in that they do not require the clearinghouse to retain as much sensitive data about the treatments that insureds have undergone.

The rules for coming to collective decisions about coverage mandates should have several features. As many insurers as possible should be made members of the clearinghouse to minimize the prospect of insureds switching to a non-member insurer after receiving a mandated treatment and, hence, of a member insurer's not receiving a transfer payment for that treatment. For this reason, it would be better if

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Merges, *Contracting Into Liability Rules: Intellectual Property Rights and Collective Rights Organizations*, 84 CAL. L. REV. 1293, 1338 (1996). Robert P. Merges noted that, "to a large degree, members acquiesce in the compensation schemes of these societies, despite the fact that there are numerous points for possible disputes, because they realize that without joint action no compensation would be forthcoming at all." *Id.* Next, although the government did not formally establish the CCC, many recognize that clearinghouses have little chance of success without some sort of enforcement mechanism. GOLDSTEIN, *supra* note 5. The original founders of the CCC knew that if the organization were to succeed, it would need both a carrot and a stick. The "carrot" was the promise of increased profits for publishers; the "stick" would be "an enforceable legal rule to the effect that unlicensed photocopying. . . constituted copyright infringement." *Id.* at 205. Finally, the presence of a substantial profit potential is needed in order to get members to participate in a clearinghouse system. In the publishing context, although the value of each transaction accounted for was small, the number of transactions was huge. This huge potential for profit gave companies an incentive to participate in the system.

[86] If payments are set correctly, it is not necessary to make investment mandatory since it will be in each insurer's interest to invest. Mandates that establish transfer prices but do not make investment mandatory have the advantage that they allow insurers for whom covering a treatment is particularly costly nonetheless to vote for a transfer payment that reflects the costs of covering it for insurers in general. If the mandate passes, they can avoid their own unusually high costs by simply declining to cover the treatment themselves.

the clearinghouse were implemented through federal action rather than state by state. The most straightforward way to do this would be through federal legislation under Congress's power to regulate interstate commerce. Membership in the clearinghouse should be mandatory, otherwise insurers will resist joining, free riding on the benefit from insureds who receive mandated treatments from member insurers while contributing nothing to the cost of providing those treatments. Coverage mandates should be required to apply to all insurers equally, that is, to mandate the same coverage and the same transfer payments for every insurer, and transfer payments should be required only in connection with switches of insureds between insurers. These two restrictions prevent the clearinghouse from devolving into a general tax and transfer scheme among the insurers.[87]

Each mandate should require a concurrent majority of insurers with substantial net inflows and insurers with substantial net outflows to be enacted and to continue in force. The part of the mandate that requires coverage should apply until it no longer commands a concurrent majority, and the part of the mandate that consists of the schedule of payments should apply forever to all treatments provided during the life of the mandate. By a concurrent majority, we mean a majority of the insurers with substantial net inflows and also a majority of the insurers with substantial net outflows. Insurers with net inflows prefer mandates with transfer payments as low as possible, and would support mandates for socially undesirable treatments if the benefit from uncompensated inflows exceeded the loss from the inefficient treatments they would be required to cover. Similarly, insurers with net outflows prefer mandates with very high transfer payments, and would support mandates for socially undesirable treatments if these transfer payments were worth more than the loss from the socially undesirable treatments they would be required to cover. The maximum transfer payment the inflow insurers would agree to and the minimum transfer payment the outflow insurers would agree to happily define a range that is nonempty only for socially desirable treatments.

Whether insurers have substantial net inflows or substantial net outflows should be calculated with respect to the patients covered by any particular proposed mandate. Initially, insurers can self-report this classification, with penalties for misrepresentation; in time, if the clearinghouse maintains anonymous data on switches, it will have enough information to police these representations itself. The purpose of disenfranchising insurers with neither inflows nor outflows and insurers with inflows or outflows but without *substantial* inflows or

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[87] An alternative scheme where coverage levels and the associated transfer payments vary might be too complicated administratively, although not necessarily so.

outflows is to prevent vote trading or vote buying. Insurers like this have no interest or an insufficiently large interest in the particulars of a mandate's schedule of transfer payments, and so might agree to vote in the inflow pool for payments that are too high or in the outflow pool for payments that are too low in exchange for a reciprocal vote on a different mandate or mandates or for some outside benefit such as a simple payment. Such payments and collusion should be legally proscribed. Ensuring that every voter on each mandate has a substantial interest in it means that any such payments or deals will have to be large, and therefore, hopefully easier to detect.

Two consequences of this voting scheme may seem strange: under it, many insurers may be disenfranchised, and the insurers are counted equally within pools, so that, for example, an insurer with 30% market share in Michigan might count the same as an insurer with two percent market share in Rhode Island. Neither of these consequences is problematic. Under the voting rules we propose, insurers are essentially homogeneous—each inflow insurer represents every other inflow insurer well with respect to the decisions they are authorized to make through the clearinghouse, and the same is true for each outflow insurer. Thus, disenfranchisement has no instrumental impact on the disenfranchised; there is no way for the enfranchised to take advantage of them. This is also why simple majority rule is better. There is no set of decisions the individual pools can make that is likely to be particularly harmful to a minority, so there is no set of decisions that the voting rule should privilege over others.[88] Simple majority rule is the only rule that has this feature of outcome neutrality. Moreover, there is no symbolic or fraternal or any other such non-instrumental value to voting in the clearinghouse. Voting here has no political connotation. It is simply a way of eliciting investors' private information about the costs and benefits of potentially efficient treatments.

One potential problem with the clearinghouse is that insurers will perceive a risk that payments will not actually be made or that the system will otherwise fail and hence will be hesitant to participate. This

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[88] A further substantive restriction to consider is a rule forbidding mandates to distinguish between classes of patients who are medically indistinguishable with respect to a particular treatment. Such a distinction can allow investors to treat each other differently using only facially neutral mandates with transfer payments tied only to switches: if insurer *A* has morbidly obese patients with irrelevant characteristic *A*, while insurer *B* has morbidly obese patients with irrelevant characteristic *B*, a mandate that requires insurers to cover bariatric surgery for patients who are morbidly obese and have characteristic *A* is facially neutral but disadvantages insurer *A* relative to insurer *B*. Such a rule would only require the government to distinguish medically relevant characteristics from medically irrelevant ones, not to assess the social value of treatments. Majority rule may be sufficient to prevent this problem, depending on the distribution of medically irrelevant characteristics, particularly since such a distribution must be persistent for the expropriation to work.

problem is small if the clearinghouse is established by law and its mandates given legal effect enforceable in the courts, as we recommend. Relatedly, an insurer may not pay because it goes bankrupt. The chances of this are small in the United States. And to the extent it is a problem, the clearinghouse can effectively insure against non-payment by setting transfer payments a little higher than it otherwise would. Another problem is that insureds may switch from insurers within the clearinghouse to insurers not within the clearinghouse, leaving the original insurer uncompensated. If the clearinghouse were implemented on a state-by-state basis, insureds who moved out of state would be in this category. This problem is solved by implementing the clearinghouse on a national basis through congressional action. Even a national clearinghouse, however, will experience the problem of uncompensated switches with respect to insureds who simply become uninsured because their jobs have ended or they can no longer afford insurance. To an extent, the clearinghouse can absorb the cost of insureds who leave the system in this way by increasing the transfer prices for switches to insurers within the clearinghouse. Alternatively, state or federal governments could make the transfer payment for insureds who become uninsured.

The clearinghouse is better than administratively mandated coverage, injunctions to cover, and damages for switching in that it harnesses insurers' private information about the costs and benefits of treatments. This means the decisions it makes about what treatments are socially desirable are more likely to be correct than the same decisions made by an administrative agency or the courts. The clearinghouse is also better than these alternatives because it saves on litigation and lobbying expenses. The clearinghouse is better than lock-in contracts and rebates in that it does not create a lock-in effect for insureds. Insureds are free to switch insurers whenever they want, and, despite this, insurers are not deterred from covering clearinghouse treatments since they expect to be compensated for such switches. The clearinghouse also avoids the first-mover problem that we described in the context of lock-in contracts. Finally, the clearinghouse involves decision-making and enforcement between insurers rather than insureds, which is advantageous because insurers are likely to be more sophisticated and less likely to be judgment proof than insureds.

III. COLLECTIVE ACTION BY USERS OF A COMMON RESOURCE GENERALLY

The problem we have been discussing in the context of health

insurance is one instance of a more general problem. We briefly generalize our discussion of the clearinghouse in this part in the hope that the solution we propose in the context of health insurance can be adapted to other instances of the general problem. The general problem is one of inducing investors to invest on the basis of social costs and benefits when private costs and benefits diverge because a subsequent investor can expropriate part of the original investor's investment with the aid of a third party who the investment benefits. In the health-insurance context, the investors are the insurers, and a subsequent insurer, with the aid of a switching insured, expropriates part of the investment of an original insurer who pays for a treatment. Other instances of the general problem include workplace education, where subsequent employers can expropriate part of the investment of original employers in workplace education by poaching employees; and foreign direct investment, where subsequent investors can expropriate part of the investment of original investors by conspiring with host governments to reassign property rights. Classic solutions to it include making the investment decision governmental rather than private, introducing governmental pricing through tort rules, or altering property rights to facilitate private pricing. The solution that we contribute is private governance mechanisms like the health-insurance clearinghouse.

Private-governance solutions target the collective-action problem that prevents investors from compensating each other for socially desirable investments by allowing a subset of investors to bind all the investors according to some set of governance rules. Without such rules, it is difficult to reach a collective agreement because each investor is always better off not joining the agreement since she then gets the benefit of improved third parties switching to her without paying any of the cost of improving them. For the same reason, being subject to the rules must be mandatory: if investors could simply replace opting out of collective agreements with opting out of the governance rules, the rules would add nothing. Another reason why it is difficult to reach a collective agreement is that each investor has an incentive to free ride on the contributions of others to the payments necessary to induce investors to invest and to negotiate the smallest possible contribution for herself. For this reason, the rules should not require unanimity to reach a decision binding on the whole: a unanimity requirement would replicate the hold-out and bargaining problems in the course of securing unanimity.

Circumventing these problems requires designing a governance regime that allows a subset of the second investors to make decisions about inducing investments that are binding on the whole, while ensuring that only prospectively efficient investments are induced, that

is, that the decision-making investors do not use the governance mechanism to take advantage of the other bound investors.[89] When a subset of investors can make decisions for the whole, no individual investor can realistically expect to free ride on the contributions of other investors by withholding her consent to a collective decision that does not specially favor her, since, if she withholds her consent, another investor's consent will do just as well.[90] A rule that requires less than unanimity for collective decisions makes investors compete to be part of the decision-making coalition, and so drives down the price the coalition must pay for their votes.[91]

In addition to being mandatory and having a voting threshold somewhat less than unanimity, the governance rules should include two substantive rules that sharply restrict investors' ability to use the rules to act in ways that are socially undesirable. First, mandates must be uniform across investors, so that what an investor is required to do under the mandate cannot depend on who the investor is. This prevents naked expropriation of the "you invest, we don't" sort. Second, compensation required by a mandate must be a fixed sum tied to flows of third parties. This prevents the governance rules from being used to enact taxes and transfers unrelated to the collective-myopia problem.

With these rules in place, the investors are divided into two camps, the concurrent support of which should be required for collective action. Investors who expect a net inflow before an improvement pays for itself want to mandate coverage of that improvement with no transfer payments. Investors who expect a net outflow before an improvement pays for itself want that improvement covered, with transfer payments as large as possible. The outflow camp will be willing to vote for a proposal so long as the transfer payments are large enough to cover the cost of investing in the improvement less the value of the improvement to them before the third parties are expected to switch, while the inflow camp will be willing to vote for a proposal so long as the transfer payments are small enough that the extra value they receive from the improvement exceeds the payments. The range of transfer payments for

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[89] Buchanan and Tullock capture this idea in their "*external-costs function*," which relates "the costs that [an individual] expects to endure as a result of the actions of others to the number of individuals who are required to agree before a final . . . decision is taken for the group." James M. Buchanan & Gordon Tullock, THE CALCULUS OF CONSENT: LOGICAL FOUNDATIONS OF CONSTITUTIONAL DEMOCRACY 63–67 (1962). More generally, this is a function of the whole set of rules and the nature of the decision-makers.

[90] With low-threshold voting rules, Buchanan and Tullock argue: "[T]here is apt to be little real bargaining. If one member of a potential agreement asks for exorbitant terms, the other members will simply turn to someone else." *Id.* at 68.

[91] In contrast, under a unanimity rule: "[E]ach voter is a necessary party to any agreement. Since each voter, then, has a monopoly of an essential resource (that is, his consent), each person can aim at obtaining the entire benefit of the agreement for himself." *Id.* at 69.

which both camps will vote is therefore the payments no less than the cost of investing in the improvement less the value the improvement generates before a switch and no more than the value the improvement generates after a switch. This range is nonempty only if the total value of the improvement exceeds its cost, that is, only if the improvement is socially desirable. Thus, concurrent support by the outflow camp and the inflow camp guarantees that mandates will be socially desirable. Division into camps is not necessary if investors are sufficiently uncertain about which camp they will wind up in.

This analysis does not hold if the investors can pay each other for votes other than through transfer payments tied to switches. One way this can happen is by vote trading across different decisions: if *A* is in the net inflow camp for improvement *x* and has no interest or only a small outflow interest in improvement *y*, while *B* is in the net outflow camp for improvement *y* but has no interest or only a small inflow interest in improvement *x*, then they both may be willing to agree that *A* will support a mandate for *y* with high transfer payments in exchange for *B* supporting a mandate for *x* with no transfer payments. This can result in investment in *x* and *y* being required even if they are socially undesirable. This problem can be addressed by having high voting thresholds in each camp, for example, a majority or supermajority decision rule, attempting to police and punish such agreements, and disenfranchising investors whose interest in a particular investment decision is relatively small.[92] Another way vote buying can happen is entirely outside the governance rules: *A* just pays *B* for her vote. The same solutions apply to this problem. Moreover, disenfranchising investors may be particularly useful here in combination with policing and punishing vote buying, if larger purchases are easier to police than smaller ones.

Two other aspects of the rules should be explicitly considered: (1) the voting rule within classes, and (2) the scope of membership. Vote buying is a reason not to use a very low voting threshold, and holdouts are a reason not to use a very high threshold. Other reasons people might vote for a socially undesirable improvement or against a socially desirable one are that they are idiosyncratic in the cost or value to them of an improvement; have incorrect information about the cost, value, or flow rates for an improvement; or make a mistake. If there is no reason to think these errors are more likely in one direction than in another, it is natural to use a voting rule that has no bias in favor of any particular outcome. The only such voting rule is majority rule. With respect to

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[92] Rules for disenfranchisement and sorting investors into inflow and outflow camps should be drawn up well in advance to prevent the drafters from setting the rules cleverly in order to game the system.

the scope of membership, the ideal scope is every investor to whom or from whom switching is possible. There is a problem, however, with investors who have high outflows out of the system; this constitutes an idiosyncratic cost of investing for them, since they cannot expect a transfer payment for those investments. For example, in the health insurance context, insureds might decide or be forced to become uninsured, for a shorter or a longer period of time. The more outflows out of the system an investor has, the higher the transfer payments he will want on inflows from within the system, as a sort of insurance premium. This extra demand will not affect the voting outcome when the range of acceptable transfer payments is sufficiently large, but in close cases or for an investor with very large net outflows out of the system, disenfranchisement may be a better alternative.

CONCLUSION

We made three major contributions in this Article. First, we described a variant of tragedy of the commons in which the commons is composed of human beings. We showed that this distinction makes a difference—primarily, in that human beings, unlike fish or forests, behave strategically. While this strategic behavior complicates analysis of commons problems, it also makes available a variety of solutions that depend on adjusting the incentives of the humans in the commons, such as contracts to which those humans are party. Second, we proposed a mandatory-membership clearinghouse for health insurers to solve the problem of their failure to cover prospectively efficient medical treatments. Our proposal has the advantage over more radical health-insurance or healthcare nationalization or privatization proposals because it is politically feasible. Both insurers and insureds are better off under our proposal than under the status quo. And, because our system is procedural, it is not clear whether adopting the procedure, as opposed to any particular transfer-payment schedule under the procedure, helps or hurts particular segments of the medical industry. As a result, we anticipate weaker political objection by interest groups. Finally, our analysis of the problem of underinvestment in prospectively efficient medical treatments and the menu of possible solutions we highlighted may have applications in other areas because the theoretical framework we develop is relevant to other settings as well and because the private-governance solution that we propose is not one of the cookbook solutions that legal and policy analysts generally consider.