## Case Study 2: Lobbying in Insulin Pricing

Before the 20<sup>th</sup> century and the discovery of insulin, diabetes was a fatal disorder. So, the first treatments for diabetes found in the 1920s were a huge deal and evidence of the progression of science and technology. That being said, the insulin used for treatment was not a perfect solution; it was made using insulin from other animals which caused negative side effects in recipients. The next great advancement took place half a century later, "The first genetically engineered, synthetic "human" insulin was produced in 1978 using E. coli bacteria to produce the insulin. Eli Lilly went on in 1982 to sell the first commercially available biosynthetic human insulin under the brand name Humulin" (American Diabetes Association [ABA]). While the creation of synthetic insulin has in general greatly improved the quality of life for diabetics, the same manufacturers of this life-saving drug are now the very reason many people dependent on the drug find themselves in undesirable circumstances.

The United States is in an interesting situation when it comes to healthcare. The US sits atop the world as its richest country and leads many fields in production and research. It should then follow that the citizens of the US should have easy access to the best goods and services given their international standing. And yet, many Americans find themselves unable to obtain or afford simple amenities such as education and healthcare. Unfortunately, insulin is no exception to this phenomenon. Since its introduction, the cost of insulin has been tightening its grip on Americans, squeezing more and more out of them; "The list price of insulin per milliliter in the United States increased, on average, 2.9 percent annually from 1991-2001, 9.5 percent per year from 2002 and 2012, 20.7 percent annually between 2012 and 2016, and 1.5 percent per year from 2016-2018" (Hayes, American Action Forum). It should be the case that as new technology ages and becomes more prevalent, its price drops. Increased competition creates affordable alternatives which in turn incentivizes firms to invest in developing new technologies

that grant them temporary monopolistic pricing powers. Despite that, it has been around 40 years since the first synthetic insulin entered the market and an estimated 14 percent of people with diabetes in the U.S. spend at least 40 percent of their income on insulin (Bakkila).

Until the summer of 2022, there has been noticeable inaction by legislators on the regulation of the insulin market. One of the largest contributions to this is undeniably the lobbying done by the pharmaceutical industry. In the remainder of this case study, I will examine how the theoretical models of lobbying discussed in lecture can be applied to the lobbying actions of pharmaceutical giant Eli Lilly against the setting of a price cap on insulin in the US.

First, the players in the model and their incentives over policy must be established. The SIG of interest is Eli Lilly, and the policymaker (pm) is the US senate. The policy in question is the price of insulin and whether a price cap should be instituted. Eli Lilly has the incentive to either have no price cap set or have a price cap as high as possible to maintain the highest level of profit attainable. The Senate would like to choose whatever policy benefits themselves and their constituents the most. The two models of lobbying that best fit this case study are the buying influence model and the persuasive model. In the buying influence model, the lobby exchanges a certain amount of contributions in exchange for influence over the final level of policy. If the policymaker is willing to go above a certain threshold,  $\bar{p}$  then the lobby will give a level of contributions c that increases with the shift in policy. If the policy shift is below the lobby's threshold, then they will choose to give no contributions and the policy will remain at the policymaker's desired level. Fitting the model to the case study, we can conclude Lilly is affecting policy. From their website, "Lilly conducts direct lobbying efforts at the federal, state, and local levels to educate policymakers on the specific implications that various legislation may have on the company, our community, and patients" (Lily, Public Policy Engagement and Political Participation). Per the influence model, if the level of policy shift were below the level desirable by Lily, they would contribute nothing and not engage in political lobbying. Assuming

the influence model holds, the lack of political action in the price regulation of insulin can be interpreted as the shift in the policy bought by the lobby.

Likewise, the model of persuasive lobbying also can be fit to this case study. In the persuasive model, there are two states of the world and two policy options. The lobby seeks to always have one policy option regardless of the state of the world. The lobby can influence the probability of their preferred policy being chosen by contributing research that indicates the state of the world aligns with their interest. Fitting this to the case study, the states of the world can be thought of as whether to price of insulin is damaging to social welfare and the policy decision is whether or not to regulate the price of insulin. The lobby would always prefer that the price is unregulated and the pm only wants regulation if the price is damaging. Lilly would therefore attempt to increase the chances that their preferred signal is received by conducting or funding research that aligns with the price of insulin being fair. Unsurprisingly, Lily gives massive amounts of funding to people and think tanks that are against the regulation of insulin prices. "Sally C. Pipes. . . is heavily funded by the Lilly Endowment, which has provided \$175,000 per year in grants to her nonprofit. . . Pipes has authored multiple opinion columns assailing any effort to cap the monthly copayment price of insulin at \$35" (Fang, The Intercept). Similar to the influence model, the fact that there wasn't any serious regulation of insulin prices before Aug. 2022 can be taken as evidence that policymakers were manipulated into inaction by effective persuasive lobbying.

On the other hand, there are several differences between class theory and the case study. First and most important, not all the information is obtained within the model. Because these corporations are multinational, they sell identical products under drastically different governments. This allows information to be extracted from other sources than the SIGs that can aid the policymakers in their decision-making. For instance, we know that insulin can be sold at a much lower price due to the prices in almost all other developed countries compared to the US. Similarly, there is an added layer of consumer feedback not considered in the model.

Policymakers can learn about the state of the world from the consumers and their constituents. If policymakers see a lot of outrage surrounding the price of insulin, they are less likely to be reliant on and believe the SIG's beliefs about the state of the world. Another difference between the influence model and this case study is the limit of only one firm interacting with the policymakers. In the model, there is a level of the desired policy shift that the lobby dictates to the policymakers. In reality, this situation should favor the policymakers more. There are lobbies on both sides of issues trying to buy their desired influence; this should make lobbies compete with one another either by raising their contributions or by decreasing their desired shift in policy to be closer to that of the policymakers. In this way, while the presence of lobbying within the influence model is evidence of a shift in policy, the same is not true in reality. Lilly engaging in lobbying is not enough evidence that their desired policy shift has been enacted.

In conclusion, there are many similarities between the buying influence and persuasive models of lobbying and Eli Lilly's lobbying against the price regulation of insulin in the US. There has been a lack of policy action against synthetic insulin manufacturers in the US since its introduction in the 1980s. The buying influence model states that the SIG will try to exchange contributions for a shift toward their desired policy and Eli Lilly themselves roundaboutly admit to this. The persuasive model states that the SIG will conduct and/or bankroll research that signals policymakers to choose the policy that most benefits the SIG. Lilly donates large sums of money to non-profits and think tanks that align with their interest in the avoidance of a price cap on insulin. That being said, these models are too simple to fit reality perfectly; The Senate can extract information from sources other than the SIGs such as other countries or their constituents.

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