Economic Evaluation of the $35 Insulin Copay Cap Policy in Medicare and Its Implication for Future Interventions

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The price of insulin has increased threefold since 2007 (1), imposing a substantial economic burden on patients and payers, which has resulted in reduced insulin adherence and dosage rationing (2). Significant legislative efforts were made in 2022 to cap the copayments needed to access insulin to $35 per month to ensure its affordability. In a previous analysis (3), we showed that this copayment cap policy is likely to reduce copayment for insulin by about $500 per year for 1.6 million people and avoid thousands of diabetes complications and fatal events that would lead to generating an additional 32,000 life-years and 21,000 quality-adjusted life-years (QALYs). However, even after accounting for the cost-saving due to a reduced risk for diabetes complications, the policy would still increase total medical costs by $5.6 billion over 20 years. To assess whether the additional costs are justifiable, in this work, we report the cost-effectiveness of this policy and draw economic implications on future policy interventions.

We have reported the incremental medical cost, incremental insulin cost, and additional gains in QALYs associated with the $35 insulin copay cap policy among Medicare beneficiaries (3). Based on these published statistics, we calculated the policy's incremental cost-effectiveness ratio (ICER) from a health care sector perspective and examined how the change in insulin cost impacts the ICER.

Figure 1 presents the ICERs of the copay cap policy at different levels of insulin cost. Based on the average costs for a yearly supply of insulin in 2021 ($7,930) (3), the policy's ICER was estimated to be $810,000/QALY and $250,000/QALY over 5-year and 20-year policy time horizons, respectively. To achieve cost-effectiveness in 20 years, from a health care sector perspective and based on a $100,000/QALY willingness-to-pay threshold (4), the annual cost of insulin must be reduced to below $5,300, or by more than 34%. Annual insulin costs have to be reduced by more than 60%, to below $3,200, to achieve cost savings. If a shorter time window is used (i.e., 5-year window), the annual cost of insulin must be further reduced to below $2,300 (or by 71%) and $1,600 (or by 80%) to achieve cost-effectiveness and cost-saving, respectively.

The $100,000/QALY willingness-to-pay threshold used in this study is often recommended as a threshold from a societal perspective, and one may rightfully argue that an economic evaluation of a national-scale public health policy should also be explored from a societal perspective. The price reduction needed to achieve value-based prices from a societal perspective may not be as stark as the health care sector perspective and requires further exploration. However, even if switching to a societal perspective could reduce the policy's ICER by half, the new ICER would still be above the willingness-to-pay threshold (i.e., not being cost-effective). Our results suggest that at current prices, insulin as a treatment is not cost-effective from a health care sector perspective and likely also from a societal perspective. Hence, a policy promoting such treatment is also likely not cost-effective. Purchasing a large volume of medical supplies with low value (i.e., the cost cannot justify the benefit) will have a direct negative impact on the economic efficiency of the health system, which in turn reduces the overall health of the population. Legislative measures to reduce insulin prices by 60–80% or roll back to price to levels before 2010 may make the copay cap policy cost-effective. For example, the price negotiation model used by the U.S. Department of Veterans Affairs can be a good reference for price control in Medicare (5). State-level initiatives (e.g., those in California) seeking to

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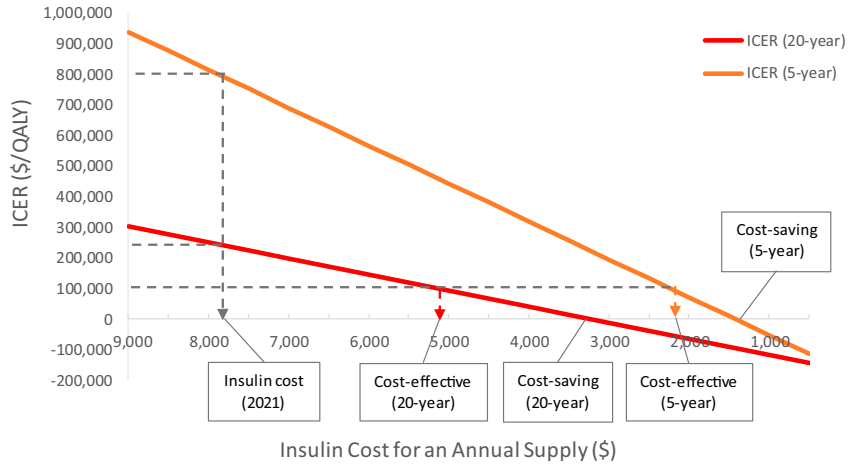

Figure 1—The incremental cost-effectiveness ratios of the $35 insulin copay cap policy. Note that a policy with an ICER under $100,000/QALY is considered cost-effective.

manufacture low-cost insulin may also be viable if the product can achieve an effectiveness and safety profile comparable with those of the existing insulin products on the market.

The reduced copay policy will also likely have unintended consequences. The policy will certainly help patients with diabetes financially and with long-term health care benefits. However, the financial benefits to people with diabetes would be variable and may exacerbate disparities in care. As suggested by our previous analysis, this policy is more likely to benefit people with relatively higher socioeconomic status. Those without insurance coverage or who have low insulin adherence due to financial restraints would likely benefit less from the policy (3).

Our analysis indicates that promoting the $35 insulin copay cap policy without accompanying regulations to reduce the price of insulin may not be a cost-effective policy. Although such a policy will benefit patients receiving these subsidies, it will increase total health care costs at a much higher rate than is typically acceptable and may exacerbate disparities.

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