



Impact of Higher Insulin Prices on Out-of-Pocket Costs in Medicare Part D

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One in three Medicare beneficiaries have diabetes, and 3.1 million require insulin (1). As insulin prices rise (2), one in four people on insulin report reducing use due to cost (3). Insulin price and affordability concerns the 7 in 10 Medicare beneficiaries with Part D drug coverage, which requires significant deductibles and copayments and places no maximum on out-of-pocket costs (4,5).

In particular, Medicare Part D has a coverage gap (doughnut hole) whereby beneficiaries pay a percentage of a drug's price until reaching catastrophic coverage (4). To lower financial burden, the Affordable Care Act incrementally reduced patients' cost-sharing during the gap from 100% to 25% of drug price (2010 to 2019) (4). Concurrently, manufacturers had to provide greater price discounts during the gap, reaching a 70% discount by 2019 (4). Although patients now pay a lower percentage of a drug's price, these savings can be counterbalanced by simultaneous price increases. Patients' cost-sharing during the gap also uses a drug's full list price and excludes manufacturer rebates that insulate plans from rising prices (2). We examined how patients' out-of-pocket costs for insulin would have dropped from 2014 to 2019 due to Part D policy changes and whether higher insulin prices offset these potential savings.

Using 2014 and 2019 Medicare formulary and pricing files, we analyzed nine insulins including the top five insulins by 2017 Part D spending (\$8.2 billion or 62% of Part D insulin expenditures) (1). Files contain plans' benefit design and not patient claims. For each insulin, we averaged monthly price and out-of-pocket cost requirements across plans nationwide. Next, we projected annual out-of-pocket costs for each insulin under standard Part D plans in each year (2014, 2019) (4). This included a deductible (\$310, \$415), coverage phase with cost-sharing set at national Part D averages for that insulin, coverage gap coinsurance (47.5%, 25%) once total drug spending exceeded gap thresholds (\$2,850, \$3,820), and 5% coinsurance once out-of-pocket costs surpassed catastrophic thresholds (\$5,000, \$5,100). Last, we projected patients' savings in out-of-pocket cost due to 2019 Part D policy changes if insulin prices remained at 2014 levels. Cost projections were based on insulin use (50 units/day) and no other medications.

From 2014 to 2019, the average annual insulin price rose 55% from \$3,819 to \$5,917 (Table 1). Monthly out-of-pocket cost for insulin in the covered phase increased 18% from \$49 to \$58. Accounting for all Part D phases, the projected

yearly out-of-pocket cost for insulin increased 11% from \$1,199 to \$1,329. If insulin prices had remained at 2014 levels, annual out-of-pocket cost would have dropped 19% to \$967 owing to lower coinsurance in the gap. This varied with the magnitude of insulin price increases. Lantus pen had the lowest price increase (19%), and annual out-of-pocket costs dropped \$167 (–13%), although patients would have saved \$292 (–23%) if prices had stayed at 2014 levels. Levemir experienced the greatest price increase (165%), and annual out-of-pocket costs increased \$992 (79%) instead of falling \$297 (–24%) as they would have if prices had stayed unchanged.

In 2019, eight of nine insulin prices exceeded \$4,800 annually, with patients' projected out-of-pocket costs surpassing \$1,000 under a standard Part D plan. From 2014 to 2019, closing the coverage gap would have reduced insulin out-of-pocket costs by 19% if prices had remained at 2014 levels. In 2019, patients paid a lower percentage of insulin price (47.5% decreased to 25%) during the gap and manufacturers provided higher discounts (50% increased to 70%). Instead, patients' projected out-of-pocket costs increased 11% because insulin prices jumped by 55% during this period. Even if insulin prices rose with inflation

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Table 1—Change in price and out-of-pocket costs for insulin under a standard Medicare Part D benefit from 2014 to 2019^a

	Out-of-pocket cost (\$)													
	Price (\$)					Out-of-pocket cost (\$)								
	30-day ^b		Annual ^b			30-day ^b			Annual ^c			Annual, ^c with increase in price from 2014		
	2014	2019	2014	2019	Change	2014	2019	Change	2014	2019	Change	2019	Change	
Human														
Intermediate: Humulin pen	294	475	3,532	5,704	61%	48	45	−7%	1,011	1,208	19%	928	−8%	
Short: Humulin R (vial)	154	226	1,849	2,716	47%	40	35	−12%	705	768	9%	783	11%	
Mix: Humulin 70/30 pen	294	476	3,530	5,710	62%	48	45	−7%	1,052	1,210	15%	928	−12%	
Analog														
Ultra-long														
Lantus pen ^d	340	405	4,081	4,857	19%	48	49	2%	1,255	1,088	−13%	963	−23%	
Lantus vial ^d	341	406	4,093	4,872	19%	47	49	4%	1,250	1,088	−13%	952	−24%	
Levemir pen ^d	341	904	4,094	10,843	165%	47	96	103%	1,253	2,245	79%	956	−24%	
Rapid														
Humalog pen ^d	368	515	4,418	6,179	40%	52	48	−7%	1,416	1,325	−6%	1,049	−26%	
Novolog pen ^d	366	505	4,387	6,064	38%	55	76	38%	1,423	1,487	4%	1,070	−25%	
Mix: Novolog 70/30 pen	365	526	4,385	6,311	44%	55	78	41%	1,423	1,541	8%	1,070	−25%	
Mean	318	493	3,819	5,917	55%	49	58	18%	1,199	1,329	11%	967	−19%	

^aNationwide analyses for 3rd quarter of 2014 ($n = 2,724$ plans) and 1st quarter of 2019 ($n = 3,326$ plans). ^bAveraged across all Part D plans, excluding special needs plans. Out-of-pocket cost reflects cost-sharing requirements during the Part D covered phase. ^cAnnual out-of-pocket costs projected based on standard Part D benefits in 2014 and 2019. In 2014, this included a \$310 deductible, coverage gap starting at \$2,850 in total drug cost (during the gap—brand-name drugs with 47.5% patient coinsurance, 50% manufacturer discount, 2.5% plan), and catastrophic threshold at \$5,000 in out-of-pocket cost. In 2019, this included a \$415 deductible, \$3,820 coverage gap threshold in total drug cost (during the gap—brand-name drugs with 25% patient coinsurance, 70% manufacturer discount, 5% plan), and catastrophic coverage at \$5,100 in out-of-pocket costs. ^dTop five insulins by Part D drug spending on insulin in 2017.

(8.4% from 2014 to 2019), policies to reduce Part D cost-sharing would have lowered patients' out-of-pocket costs.

Of concern, insulin list prices continue to rise, driven by multiple complex factors including manufacturers competing by offering greater proprietary rebates to pharmacy benefit managers for formulary placement. Since measures to close the Part D gap were fully implemented in 2019, future price increases will not be counteracted unless new policies are enacted to reduce patients' cost-sharing (4,5). To ensure access to medications, proposals include eliminating rebates and basing patient and Medicare cost-sharing on lower actual prices, passing rebate savings to patients, capping out-of-pocket spending, accelerating generic drug competition, and allowing Medicare to negotiate prices with manufacturers (2,5).

Our study limitations include projecting annual cost-sharing based on use of a single insulin and no other medications.

In conclusion, efforts to reduce patients' out-of-pocket cost by closing the Medicare

Part D coverage gap were largely negated by higher insulin prices. Lower insulin prices and other solutions are necessary to improve access to treatment for Medicare beneficiaries with diabetes.

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data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

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