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What Are We Learning from State Reporting on Drug Pricing?

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This report summarizes what states are learning from reporting required by prescription drug price transparency laws, which include reports on data submitted by health insurers, manufacturers, and pharmacy benefit managers. The review period includes reports published by states through August 2019. The National Academy for State Healthy Policy's Center for State Rx Drug Pricing, with support from Arnold Ventures, commissioned this analysis from experts affiliated with Mathematica Policy Research.

Executive Summary

This report summarizes what states are learning from reporting required by prescription drug price transparency laws, including reports on data submitted by health insurers, manufacturers, and pharmacy benefit managers (PBMs). The review period includes reports published by states through August 2019.

Costliest Drugs across States

Five states — California, Nevada, Maine, Oregon and Vermont — have published reports identifying specific drugs that are high cost, for which costs are rising fastest, and/or that are most frequently prescribed. In Nevada, these drugs include only those related to treatment of diabetes. California, Maine, Oregon, and Vermont reported up to 126 prescription drugs across all therapeutic uses. These states reported many of the same drugs—including five drugs used for treatment of diabetes and four drugs used for treatment of psoriasis, psoriatic arthritis, or rheumatoid arthritis.

Impact on Premiums

California, Vermont, and Oregon have reported impacts of retail prescription drug costs on insurance premiums, averaging 13 percent in California (before accounting for manufacturer rebates, which averaged 10.1 percent of insurers' retail drug costs) in 2017, 15.67 percent of premiums in Vermont in 2018 (before accounting for rebates), and up to 18 percent of premiums in Oregon (after accounting for rebates) in 2018.

Manufacturer and PBM Reporting

Requiring both manufacturers and PBMs to report allows states to track drug pricing along the supply chain. As of August 2019, only Nevada had publicly reported information about manufacturer and PBM costs, focused on essential diabetes drugs. Nevada's report indicates that:

- Production costs accounted for 29 percent of manufacturers' estimated average revenue in 2018 for essential diabetes drugs after rebates. Administrative costs and profit each accounted for 25 percent. On average, manufacturers earned $42 in profits for every $100 spent on production and administrative cost for these drugs.

- Financial assistance to consumers accounted for 14 percent of the manufacturers' estimated total revenues after rebates, although most manufacturers reported offering no financial assistance.
- Most of the rebates that PBMs in Nevada negotiated nationally for essential diabetes drugs were on behalf of private insurers and self-insured employer plans. PBMs retained 6.6 percent of all rebates, whether negotiated on behalf of private third parties or Medicaid.

Early Lessons

The information these states have made public suggests some early lessons:

- States share concerns about the affordability of many of the same drugs. There may be substantial value in sharing information across states with similar confidentiality protections while reducing the burden of redundant reporting to multiple states.
- Understanding pricing across the entire supply chain, from the manufacturer to the consumer, is critical. Reporting that uses consistent concepts and measures can foster mutual understanding of facts among policymakers and stakeholders in a complex system.
- The agency responsible for obtaining data must have the authority and resources to follow up when the data are not complete or credible, if drug transparency laws are to help states develop a fair approach to ensuring that prescription drugs are affordable.

Introduction

This report summarizes what states are learning from reporting required by prescription drug price transparency laws, including data reported by health insurers, manufacturers, and pharmacy benefit managers (PBMs). Since 2017, nine states have enacted drug price transparency legislation that requires such reporting.[1]

Five of these states — California, Nevada, Maine, Oregon, and Vermont — have published reports identifying specific drugs that are high cost (defined by total spending), for which costs are rising fastest (defined as year over year increase), and/or that are most frequently prescribed (so represent high consumer exposure).[2] In Nevada, these drugs include only those related to treatment of diabetes. California, Maine, Oregon, and Vermont included prescription drugs across all therapeutic classes. In Section 1, we present the drugs of interest that these states reported and look, in particular, at the 30 drugs of interest reported by at least three of these states.

In Section 2, we describe the impact of drug prices on health insurance premiums, as reported by three states, California, Oregon, and Vermont. These states have published the dollar amounts and/or the percentage of premiums attributed to retail prescription drugs — in

California and Vermont, before manufacturer and other rebates and price discounts to insurers; and in Oregon, after rebates and price discounts.

In Section 3, we describe what Nevada is learning from the reporting required of manufacturers and PBMs. Currently, eight states have enacted laws requiring PBMs to report rebate amounts either for specific drugs or in the aggregate. These laws have taken effect in four states (Connecticut, Nevada, Texas, and Washington) as part of each state's drug pricing transparency effort, but as of August 2019, only Nevada (for specified essential diabetes drugs) had made summary information public.

Reporting of High-Cost, High Cost-Growth, and Most Prescribed Drugs

California, Maine, Nevada, Oregon, and Vermont have reported drugs that account for high total cost or high cost growth, or because they are frequently prescribed, represent high consumer exposure. Maine derived its lists from analysis of the state's all-payer claims database (APCD) system; California and Oregon relied on insurer reporting under special statutory authority; and Vermont relied on both insurer and Medicaid reporting. Nevada derived it list of drugs from analysis of a purchased database.

Table 1 lists the number of unique drug names reported in each state. California and Vermont reported the most extensive list of drugs: each reported on more than 120 unique drug names; Nevada, Maine, and Oregon each reported on approximately 50 unique drug names.

Table 1. Number of Drugs Listed in State Public Reports, by State

Reporting state	Reference period	Number of unique drug names reported*
California	CY 2017	126
Maine	FY 2018	51
Nevada	CY 2018	53
Oregon	CY 2018	56
Vermont	CY 2018	121

*The number of unique drugs was developed by merging separate lists of drugs, if the state reported separate lists by reason for reporting and/or by insurer.

Source: Mathematica analysis of data reported in these reports: California Department of Managed Health Care (2018); Maine Health Data Organization (2018); Nevada Department of Health and Human Services (2018b); Oregon Department of Consumer and Business Services (2019); and State of Vermont Green Mountain Care Board (2019). See full references at the end of this report.

We matched drugs reported across these states by National Drug Code (NDC) and identified 128 unique NDCs that at least two states selected in common (shown in Appendix 1). The 30 drugs that at least three states selected in common are shown in Table 2.

These 30 drugs span multiple therapeutic classes, but several have similar therapeutic uses. Eight of the drugs are used for treatment of diabetes myelitis — including five drugs, Lantus Solostar, Novolog, Januvia, Metformin, and Victoza, which four of the five states selected in common.

At least three of the four states that did not focus only on essential diabetes drugs — California, Maine, Oregon, and Vermont — selected in common a number of additional drugs that clustered around treatment for asthma (Fluticasone Prop, Ventolin, Proair, and Symbicort); depression (Bupropion Hcl and Sertraline); hepatitis C (Harvoni and Epclusa); multiple sclerosis (Copaxone and Tecfidera); psoriasis, psoriatic arthritis, and/or rheumatoid arthritis (Stelara, Cosentyx, Enbrel, Humira Syringe, and Humira Pen); and a range of cardiovascular concerns (Eliquis, Xarelto Hydrochlorothiazide, Atorvastatin).

Table 2. Drugs Reported by Three or More States, 2017-2018 (in alphabetic order of primary therapeutic use)

NDC	Drug name	States	Therapeutic class	Primary therapeutic use	Reasons for reporting
00054327099	Fluticasone Prop	CA, ME, VT	Respiratory tract agents	Treatment of allergic and non-allergic nasal symptoms; long term management of asthma, COPD	Most frequently prescribed (CA, ME, VT)
00173068220	Ventolin	CA, ME, OR, VT	Autonomic drugs; respiratory tract agents	Treatment of asthma, acute bronchitis	Most costly (CA); highest cost increase (CA); most frequently prescribed (CA, ME, OR, VT)
59310057922	Proair	CA, ME, OR, VT	Beta-Adrenergic agents	Treatment of asthma, acute bronchitis	Most frequently prescribed (CA, ME, OR, VT)
00186037020	Symbicort	CA, ME, VT	Antiasthmatic and bronchodilator agents	Treatment of asthma, chronic obstructive pulmonary disease (COPD)	Most frequently prescribed (ME); most costly (ME, CA); highest price (VT)
00003089421	Eliquis	CA, ME, OR	Blood formation, coagulation, and thrombosis agents	Prevention of blood clots/stroke in people with atrial fibrillation.	Most frequently prescribed (ME); highest price increase (CA, ME); most costly (CA, ME)
50458057930	Xarelto	CA, ME, VT	Anticoagulants, coumarin type	Treatment/prevention of blood clots	Most costly (CA, ME); highest cost increase (CA, ME, VT)
50111078751	Azithromycin	CA, ME, OR	Antibacterials	Treatment of bronchitis; pneumonia, sexually transmitted diseases, and infections of the ears, lungs, sinuses, skin, throat, and reproductive organs.	Most frequently prescribed (CA, ME, VT)
45963014205	Bupropion Hcl	CA, VT, OR	Antidepressants	Treatment of depression	Most frequently prescribed (VT); most costly (CA); highest price increase (CA)
68180035302	Sertraline	CA, ME, OR, VT	Antidepressants	Treatment of depression, obsessive-compulsive disorder (OCD), posttraumatic stress disorder (PTSD), premenstrual dysphoric disorder (PMDD), social anxiety disorder, panic disorder	Most frequently prescribed (CA, ME, OR, VT)
00002771559	Basaglar (Kwikpen)	ME, NV, OR	Hormones and synthetic substitutes	Treatment of diabetes myelitis type 1 and 2	Highest price increase (ME, NV)
00002879959	Humalog (Kwikpen)	ME, NV, OR	Hormones and synthetic substitutes	Treatment of diabetes myelitis type 1	Most costly (CA, ME); highest price increase (CA, ME, NV); most frequently prescribed (CA)

00002751001	Humalog	CA, ME, NV, OR	Hormones and synthetic substitutes	Treatment of diabetes myelitis type 1	Most costly (CA, ME, OR); most frequently prescribed (CA); highest price increase (CA, ME, NV)
00088221905	Lantus Solostar	CA, ME, NV, VT	Hormones and synthetic substitutes	Treatment of diabetes myelitis type 1 and 2	Most costly (CA, ME); highest price (VT); Most commonly prescribed (ME, VT); highest cost increase (NV)
00169633910	Novolog	NV, ME, OR, VT	Hormones and synthetic substitutes	Treatment of diabetes myelitis type 1 and 2	Most costly (ME); highest price (OR, VT); highest cost increase (NV); most frequently prescribed (CA)
00006027731	Januvia	CA, ME, NV, VT	Blood glucose regulators	Treatment of diabetes myelitis type 2	Most costly (CA, ME); highest cost increase (CA, ME, VT); most commonly prescribed (CA)
Multiple NDCs	Metformin	CA, NV, OR, VT	Blood glucose regulators	Treatment of diabetes myelitis type 2	Most frequently prescribed (CA, OR); highest cost increase (NV, VT); most costly (CA)
00169406013	Victoza	CA. ME, NV, VT	Hormones and synthetic substitutes	Treatment of diabetes myelitis type 2	Most costly (CA, ME); highest cost increase (CA, NV); most frequently prescribed (CA); highest price (VT)
61958180101	Harvoni	CA, ME, VT	Anti-infective agents	Treatment of hepatitis C	Most costly (CA, ME); highest cost increase (CA); highest price (VT)
61958220101	Epclusa	CA, ME, OR, VT	Antivirals	Treatment of hepatitis C	Most costly (CA, ME); highest price (OR, VT); highest cost increase (CA)
16729018317	Hydrochlorothiazide	CA, ME, OR, VT	Diuretics	Treatment of high blood pressure, edema, kidney stones	Most frequently prescribed (CA, ME, OR, VT)
60505258009	Atorvastatin	CA, ME, OR, VT	Antihyperlipidemics	Treatment of high cholesterol and triglyceride levels	Most frequently prescribed (CA, ME, OR, VT); most costly (CA); highest cost increase (CA)
61958200201	Descovy	CA, ME, VT	Antivirals	Treatment of HIV-1	Most costly (CA); highest cost increase (CA, ME, VT); most frequently prescribed (CA)
68546032512	Copaxone	CA, ME, OR, VT	Miscellaneous therapeutic agents	Treatment of multiple sclerosis	Most costly (CA, ME); highest cost increase (CA); highest price (OR, VT)
64406000602	Tecfidera	CA, ME, OR, VT	Psychotherapeutic and neurological agents - misc.	Treatment of multiple sclerosis	Most costly (CA, ME, OR); highest cost increase (CA); highest price (VT)

57894006103	Stelara	CA, ME, VT	Immunological agents	Treatment of plaque psoriasis, psoriatic arthritis	Most costly (CA, ME); highest cost increase (CA, ME, VT); highest price (VT); most frequently prescribed (OR)
Multiple NDCs	Cosentyx	CA, ME, OR, VT	Immunological agents	Treatment of plaque psoriasis, psoriatic arthritis, ankylosing spondylitis	Highest price (VT); most costly (CA); highest cost increase (CA, ME, OR); most frequently prescribed (OR)
58406044504	Enbrel	CA, ME, OR, VT	Miscellaneous therapeutic agents	Treatment of plaque psoriasis, psoriatic arthritis, ankylosing spondylitis, juvenile idiopathic arthritis	Most costly (ME, CA); highest cost increase (CA, OR, VT); most frequently prescribed (CA, OR); highest cost (VT)
00074379902	Humira (Syringe)	CA, ME, OR, VT	Gastrointestinal drugs; miscellaneous therapeutic agents	Treatment of rheumatoid arthritis, plaque psoriasis, ankylosing spondylitis, Crohn's disease, ulcerative colitis	Most costly (CA, ME, OR); highest price (VT); highest cost increase (CA, OR, VT); most frequently prescribed (CA)
00074433902	Humira (Pen)	CA, ME, OR, VT	Gastrointestinal drugs; miscellaneous therapeutic agents	Treatment of rheumatoid arthritis, plaque psoriasis, ankylosing spondylitis, Crohn's disease, ulcerative colitis	Most costly (CA, ME, OR); highest price (VT); highest cost increase (CA, OR, VT); most frequently prescribed (CA)
69097081412	Gabapentin	CA, ME, OR, VT	Anticonvulsants	Treatment/prevention of seizures, pain	Most frequently prescribed (CA, ME, OR, VT); highest expenditure (CA)

Source: Mathematica analysis of drug website data and data reported in: California Department of Managed Health Care (2018); Maine Health Data Organization (2018); Nevada Department of Health and Human Services (2018b); Oregon Department of Consumer and Business Services (2019); and State of Vermont Green Mountain Care Board (2019).

Impact on Insurance Premiums

Three states — California, Oregon, and Vermont — have reported impacts of rising drug prices on insurance premiums. California[3] reported that insurer payments for retail prescription drugs totaled $8.7 billion in 2017, accounting for 13.1 percent of health plan premiums that year. Specialty drugs accounted for a small minority of prescriptions (1.6 percent), but more than half (51.5 percent) of all insurer spending on retail prescription drugs.

Manufacturer rebates and consumer cost sharing lessened the impact of retail prescription drugs on premiums in California, compared to what it might otherwise have been. Manufacturer rebates to insurers equaled about 10.5 percent ($915 million) of the $8.7 billion insurers spent on retail prescription drugs. Among the 25 most frequently prescribed drugs (representing 42.8 percent of total spending on retail prescription drugs), health plan enrollees paid approximately 3 percent of the cost overall — ranging from 2.9 percent of the cost of specialty drugs to 56.6 percent of the cost of generics. Enrollees paid about 8.8 percent of the cost of the 25 most costly drugs (91.2 percent of total spending on retail prescription drugs) reported by insurers.

Vermont [4] reported that prescription drugs accounted for 15.67 percent of premium rates in 2018 (before accounting for manufacturer rebates and other price concessions). Expressed as a per member per month (PMPM) amount, that averaged $81.65 PMPM in 2018. Vermont also identified the three drugs contributing the most to premiums: Humira Pen, Harvoni, and Enbrel Sureclick. Specialty drugs as a category contributed most to premium increases, compared with generic or brand name drugs.

Oregon[5] reported the impact of prescription drugs on premium rates PMPM in 2018 after accounting for manufacturer rebates or other price concessions to insurers. Insurers reported impacts that ranged from a low of 2.5 percent of premiums ($13 PMPM, or about $154 per member annually, for one insurer's small-group plans) to 18 percent of premiums (about $85 PMPM, or more than or $1,000 per member annually, for two insurers' small group plans, respectively. At the median, prescription drugs accounted for 11.9 percent of the premiums—nearly $53 PMPM in 2018, or about $635 annually.

Manufacturer and PBM Reporting

At present, five states — Nevada, Connecticut, Maine, Texas, and Washington — have enacted laws that require both manufacturers and PBMs to report annually. Manufacturers are required to report information on specified drugs. PBMs are required to report information about the rebates they have obtained from manufacturers — either in the aggregate (for all drugs) or for specified drugs. Requiring both manufacturers and PBMs to report offers the potential for

states to track pricing along the supply chain for drugs of interest, if the state aligns the level of information that each must report.

The drug cost transparency reporting requirements in these four states are shown in Table 3. Washington will require PBMs to report information for each covered drug — a provision that will enable the Washington Health Care Authority to track prices across the supply chain for

Table 3. States that Require Reporting by Both Manufacturers and PBMs*

State	Manufacturers must report:**	PBMs must report:
Connecticut	• Total company level research and development costs for the most recent year	• The aggregate dollar amount for all rebates concerning drug formularies that PBM collected from pharmaceutical manufacturers, including those that manufactured outpatient prescription drugs covered by the health carriers and are attributable to patient utilization of such drugs under the health care plan • The aggregate dollar amount of all rebates excluding rebates received by health carriers
Nevada	• Total administrative expenditures (including marketing and advertising costs) • Profit earned and percentage of total profit attributable to the drug • Total amount of financial assistance provided through patient assistance • Cost associated with coupons • Wholesale acquisition cost • History of any increase over the 5 years including percentage increase, date of increase, and explanation • Aggregate amount of all rebates provided to PBM's	• Total (aggregate) amount of rebates negotiated with manufacturers during the previous year • Total amount of rebates retained by the PBM • Total amount of rebates negotiated for purchases of drugs for use by Medicare and Medicaid recipients, and persons covered by third parties that are or are not governmental entities
Texas	• Total company level research and development costs for the previous calendar year	• Aggregated rebates, fees, price concessions, and other payments from manufacturers • Aggregated dollar amount of rebates, fees, price concessions from manufacturers that were (a) passed to insurers, (b) passed to enrollees at point of sale; and (c) retained by the PBM
Washington	• Annual manufacturing costs • Annual marketing and advertising costs • Total research and development costs • Total costs of clinical trials and regulation • Total costs for acquisition of the drug • Total financial assistance given by the manufacturer through assistance programs, rebates, and coupons	• All discounts (total dollar amount and percentage discount) and all rebates received from manufacturers for each drug on the PBM's formularies • Total dollar amount of discounts and rebates that are retained by the PBM for each drug • Actual total reimbursement amounts for each drug the PBM pays retail pharmacies after all fees • Negotiated price health plan pays PBM for each drug • Amount, terms, and conditions relating to copayments, reimbursement policies, etc. • Disclosure of any ownership interest the PBM has in a pharmacy or health plan with which it conducts business

Sources: Connecticut HB 5384/Public Act 18-41(2018); Nevada Department of Health and Human Services (2018a); Texas HB 2536 (2019) ; and Washington HB 1224, Chapter 334 (2019).

* Maine also requires reporting from manufacturers and PBMs. The Maine Health Data Organization will adopt rules specifying the data elements to be reported.

** In addition to the items indicated, each state requires manufacturers to report reasons for price increases, if any.

each drug.[6] Nevada requests PBM reporting on essential diabetes drugs (collectively), as specifically identified by the Nevada Department of Health and Human Services. Connecticut and Texas will require PBMs to report aggregate rebates obtained across all drugs from pharmaceutical manufacturers. In Maine, the Maine Health Data Organization will adopt rules specifying the data elements to be reported.

As of August 2019, Nevada was the only state that had publicly reported information about manufacturer costs and the role of PBMs in the final cost of drugs to consumers that are privately insured or enrolled in Medicare or Medicare.[7] Together with manufacturer reporting, reporting by PBMs offers a reasonably complete (if aggregated) picture of factors that contribute to essential diabetes drug costs in Nevada.

Nevada asks both manufacturers and PBMs to report pricing information for essential diabetes drugs in the aggregate and, in general, at the national level. Manufacturers report only one item specific to Nevada: rebates paid to PBMs for essential diabetes drugs in Nevada.

A summary of the information reported by manufacturers and PBMs, as shown in Nevada's public report, is shown in Table 4. Because Nevada reported PBM-negotiated rebates for essential diabetes drugs ($1.9 billion) at the aggregate national level and manufacturer rebates only in Nevada and as the average aggregated across manufacturers, they cannot be compared. Such discrepancies make it impossible to track the supply chain for these drugs nationally or in Nevada. Nevertheless, some insights can be drawn within the information reported by manufacturers and PBMs, respectively.

Table 4. Summary of Data Reported by Manufacturers and PBMs in Nevada for Essential Diabetes Drugs

	Average amount per manufacturer (simple averages)	Percent of estimated average manufacturer revenue after rebates
Manufacturer-reported data for essential diabetes drugs		
Estimated total revenue after rebates (national)*	$204,353,658	100.0 percent
Production cost	$58,934,388	28.8 percent
Administrative expenses	$65,548,748	32.1 percent
Profit	$51,979,630	25.4 percent
Cost of consumer financial assistance	$27,890,892	13.6 percent
Total provided through any patient prescription assistance program	$12,874,326	6.3 percent
Consumer coupons and consumer copayment assistance programs	$14,036,828	6.9 percent
Manufacturer cost of redeeming coupons and use of consumer copayment assistance programs	$979,738	0.5 percent
Aggregate rebates to PBMs in Nevada	$3,039,646	1.5 percent
	Total amount (all PBMs)	**Percent of PBMs' total negotiated rebates**
PBM-reported data for essential diabetes drugs (Nevada only):		
Total rebates negotiated with manufacturers	$1,922,857,158	100.0 percent
Total rebates negotiated for persons covered by		
Medicaid	$31,648,939	1.6 percent
3rd party governmental entities, not Medicare or Medicaid	$597,759,023	31.1 percent
3rd parties that are not governmental entities (potentially including self-insured employer plans)	$1,293,449,196	67.3 percent
Total rebates retained by the PBM	$126,754,864	6.6 percent

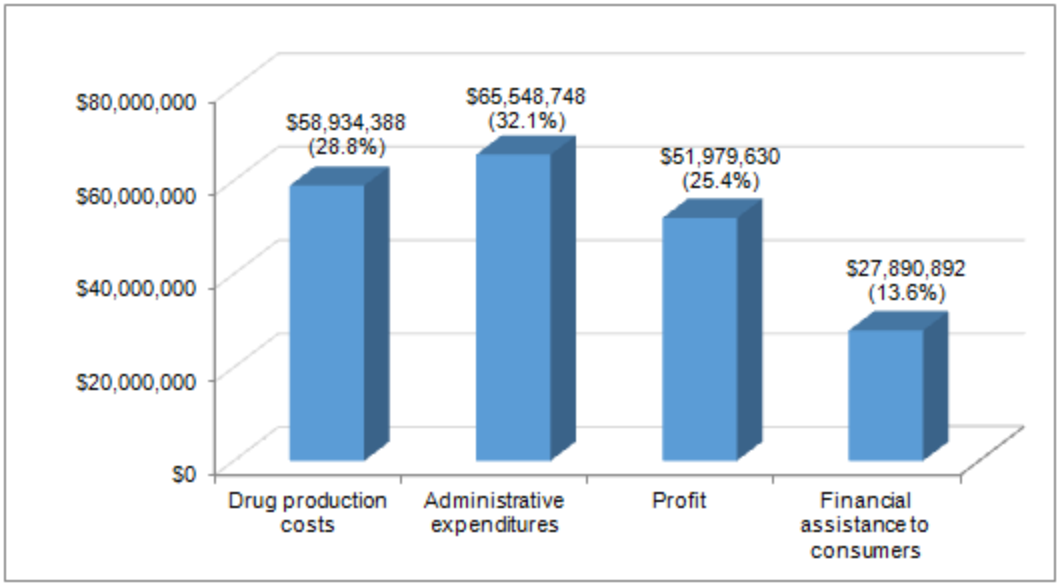
Source: S. Jones, et al. (2019), Tables 4, 5 and 6.

*Calculated as the sum of all shown manufacturer-reported amounts excluding aggregate rebates to PBMs in Nevada.

1. Manufacturer cost, profit, and consumer assistance

In 2018, average manufacturer costs and profits for essential diabetes drugs, reported at the national level, totaled nearly $204.4 million (Figure 1). Drug production costs accounted for just 29 percent of the total ($58.9 million).

Figure 1. Reported Profits and Production and Administrative Costs for Essential Diabetes Drugs (Nevada)



Source: S. Jones, et al. (2019), Tables 4 and 5.

Manufacturers' administrative expenditures, which may include executive compensation, accounting and legal fees, marketing, advertising, and other administrative expenses as each manufacturer deems reasonable, accounted for $65.5 million. This amount exceeded their reported average production costs (although the Nevada report indicates multiple drug manufacturers reported $0 for total administrative expenditures, and likely included all their costs for manufacturing the drug in the drug production costs).

Manufacturers reported average profits (nearly $52.0 million) — equal to 25.4 percent of the sum of production cost, administrative cost, consumer assistance, and profit — or 41.8 percent of total production and administrative cost. That is, aggregated across reporting manufacturers, manufacturers of essential diabetes drugs earned $42 in profits for every $100 they spent on production and administrative cost.[8]

Nationally, financial assistance to consumers accounted for an estimated 13.6 percent ($27.9 million) of manufacturers' estimated average total revenues after rebates for essential diabetes drugs. This financial assistance included patient prescription programs, coupons, or copayment assistance programs. However, more than half of the reporting manufacturers indicated that they provided no financial assistance through patient prescription assistance programs (58 percent), and also provided no rebates to PBMs or pharmacies (55 percent). By inference, the average dollar amount of financial assistance among manufacturers that provided any financial assistance (presumably the larger manufacturers) was more than twice the average across all manufacturers (including those that provided none).

2. PBM negotiated and retained rebates

PBMs reported negotiating more than $1.9 billion in rebates for essential diabetes drugs for Nevadans (Table 4). Nearly this entire amount was negotiated on behalf of private third parties — predominantly private insurers and self-insured employer plans ($1.3 billion) or other nongovernmental third parties ($598 million). PBMs reported retaining 6.6 percent of all rebates that they negotiated, whether on behalf of private third parties or Medicaid.

Differences in how Nevada's public report summarized the data obtained from manufacturers and PBMs make it impossible to develop a picture of the supply chain from the information offered—although it seems likely that Nevada has the information necessary to do this. Nevada's report demonstrates the crucial importance of requiring manufacturers and PBMs to report information at the same level of aggregation — at the state level or nationally (but not either/or), and for the same individual drugs or narrowly specified groups of drugs — in order to build a coherent picture of the factors that contribute to high consumer cost.

Summary

This report summarizes information that five states — California, Maine, Nevada, Oregon, and Vermont — have obtained from insurers, manufacturers, and/or PBMs to achieve greater drug price transparency. Each of these states is in a relatively early stage of obtaining and understanding their data. Nevertheless, the information they have made public suggests some early lessons for states interested in obtaining meaningful reporting for drug price transparency.

- States share concerns regarding the affordability of many of the same drugs. We identified 120 drugs that concern at least two of the five states — due to high cost, fast-rising cost, and/or the frequency with which the drug is prescribed. The large number of drugs that are of concern across states indicates that there might be substantial value in sharing information across states. State efforts such as Maryland's recently enacted Drug Affordability Review Board might initially focus on many of these same drugs.[9] States that are developing statutory authority to require manufacturer reporting for these drugs might consider explicitly authorizing data sharing with other states that have compatible confidentiality protections — or else explore other options available in current law or regulation to reduce manufacturers' burden of redundant reporting to multiple states.
- There is substantial value in understanding pricing across the entire supply chain, from the manufacturer to the consumer, for drugs that drive increases in health insurance premiums and consumer costs. States that design reporting templates using consistent and compatible concepts and measures, and report those measures publicly, can foster mutual understanding of facts among policymakers and stakeholders in a complex system. However, if rebates and other information are reported collectively for all drugs, it

frustrates the ability of policymakers to understand impacts on costs for specific drugs. PBM reporting by manufacturer/product code (if not by NDC) is critical to understanding the supply chain for the specific drugs of interest to the states. Nevada's PBM reporting requirement — for a list of specified NDCs — demonstrates that PBMs are able to report on specific drugs, not only on their aggregate business.[10]

- When requiring manufacturers, PBMs, or other entities to report drug price data, it is critical that the responsible agency be given the authority and resources necessary to follow up when reported data are not complete or credible. Especially in the first years of implementation, the reporting entities may be learning how to report, and they may be reluctant to invest in getting the data right. Accurate reporting is essential for drug transparency laws to help states develop a fair approach to ensuring that prescription drugs are affordable.

References and Appendix

Arkansas

Arkansas SB 520/Act No. 994, 2019. Available at: http://www.arkleg.state.ar.us/assembly/2019/2019R/Acts/Act994.pdf. Accessed August 1, 2019.

California:

California Department of Managed Health Care. "Prescription Drug Cost Transparency Report (SB 17): Measurement Year 2017." Sacramento, CA: Department of Managed Health Care, December 2018. Available at https://www.dmhc.ca.gov/Portals/0/Docs/DO/sb17.pdf. Accessed July 31, 2019.

California Office of Statewide Health Planning and Development. "Cost Transparency: Prescription Drugs (CTRx)," 2019. Available at https://oshpd.ca.gov/data-and-reports/cost-transparency/rx/. Accessed July 31, 2019.

Connecticut:

State of Connecticut, Substitute House Bill No. 5384/Public Act No. 18-41. Available at https://www.cga.ct.gov/2018/ACT/pa/pdf/2018PA-00041-R00HB-05384-PA.pdf. Accessed July 31, 2019.

Iowa:

Iowa SF 563, 2019. Available at: https://www.legis.iowa.gov/legislation/BillBook?ga= 88&ba=SF percent20563. Accessed August 1, 2019.

Louisiana:

Louisiana SB 283/Act No. 371, 2018. Available at: https://legiscan.com/LA/text/SB283/id/1799999/Louisiana-2018-SB283-Chaptered.pdf. Accessed August 1, 2019.

Maine:

Maine Health Data Organization. "MHDO Prescription Drug Reports," June 2018. Available at https://mhdo.maine.gov/tableau/prescriptionReports.cshtml. Accessed July 31, 2019.

Minnesota:

Minnesota SF 278, 2019. Available at: https://www.revisor.mn.gov/bills/bill.php?b=senate&f=SF0278&ssn=0&y=2019. Accessed August 1, 2019.

Nevada:

Nevada Department of Health and Human Services, SB539 Reporting Timeline v08.10.2018, August 10, 2018a. Available at: http://dhhs.nv.gov/uploadedFiles/dhhsnvgov/content/HCPWD/SB539 percent20Drug percent20Transparency percent20Reporting percent20Timeline_v08.10.2018_website.pdf. Accessed July 31, 2019.

Nevada Department of Health and Human Services. "Essential Diabetes Drugs Price Increase Report." Carson City, NV: Division of Public and Behavioral Health, Primary Care Office. September 2018. Available at http://dhhs.nv.gov/uploadedFiles/dhhsnvgov/content/HCPWD/09.11.2018 percent20Nevada percent20Essential percent20Diabetes percent20Drugs percent20Price percent20Increase percent20Report_Final.pdf. Accessed July 31. 2019.

Jones, S., P. Thompson, J. Tucker, H. Mitchell, T. McKnight, H. Wallace, and K. Devine. "Drug Transparency Report 2019 Essential Diabetes Drugs" Carson City, NV: Nevada Department of Health and Human Services, Division of Public and Behavioral Health, May 2019. Available at http://dhhs.nv.gov/uploadedFiles/dhhsnvgov/content/HCPWD/DHHS percent202019 percent20Drug percent20Transparency percent20Report percent205-31-2019(1).pdf. Accessed July 31, 2019.

Oregon:

Oregon Department of Consumer and Business Services. "Insurer Reports on Prescription Drugs Drug Price Transparency Program," 2019. Available at https://dfr.oregon.gov/drugtransparency/data/Documents/insurer-reports-rx-drugs-2019.pdf. Accessed October 16, 2019.

Texas:

Texas HB 2536, 86th Legislature, 2019-2020. Available at: https://legiscan.com/TX/text/HB2536/id/2027782/Texas-2019-HB2536-Enrolled.html. Accessed July 31, 2019.

Vermont:

Office of the Vermont Attorney General. "Prescription Drug Cost Transparency-Manufacturer and Health Insurer Annual Reporting" (undated). https://ago.vermont.gov/drug-price-transparency-manufacturer-and-health-insurer-annual-reporting/. Accessed July 31, 2019.

State of Vermont Green Mountain Care Board. "Impact of Prescription Drug Costs on Health Insurance Premiums." Montpelier, VT: State of Vermont Green Mountain Care Board, January 2019. Available at https://legislature.vermont.gov/assets/Legislative-Reports/Act-193-Report-Impact-of-Prescription-Drug-Costs-on-Health-Insurance-Premiums.pdf. Accessed July 31, 2019.

Washington:

Washington HB 1224/Chapter 334, 2019. Available at: http://lawfilesext.leg.wa.gov/biennium/2019-20/Pdf/Bills/House percent20Passed percent20Legislature/1224-S2.PL.pdf

APPENDIX 1: Drugs Reported by Two or More States: California, Maine, Nevada, Oregon, and Vermont

NDC	Drug	States	Therapy Class
00173069600	Advair (Diskus)	CA, ME	Respiratory Tract Agents
Multiple NDCs	Amlodipine Besylate	CA, OR	Antihypertensives
Multiple NDCs	Amoxicillin	CA, OR	Antibacterials
60505258009	Atorvastatin	CA, ME, OR, VT,	Antihyperlipidemics
60505257909	Atorvastatin	CA, OR, VT,	Antihyperlipidemics
50111078766	Azithromycin	CA, VT	Antibacterials
50111078751	Azithromycin	CA, ME, OR	Antibacterials
00002771559	Basaglar (Kwikpen)	ME, NV, OR	Hormones and Synthetic Substitutes
00173085910	Breo Ellipta	CA, ME	Respiratory Tract Agents
45963014205	Bupropion Hcl	CA, OR, VT,	Antidepressants
10370010150	Bupropion Hcl	CA, OR, VT,	Antidepressants
00069046903	Chantix	CA, VT	Antidotes, Deterrents, and Toxicological Agents
00069047103	Chantix	CA, VT	Antidotes, Deterrents, and Toxicological Agents
68546032512	Copaxone	CA, ME, OR, VT,	Miscellaneous Therapeutic Agents; Miscellaneous Therapeutic Agents (Platelet-Aggregation Inhibitors)
	Cosentyx	CA, ME, OR, VT,	Immunological Agents
61958200201	Descovy	CA, ME, VT	Antivirals
00024591401	Dupixent	ME, OR	Immunological Agents
00003089421	Eliquis	CA, ME, OR	Blood Formation, Coagulation, and Thrombosis Agents
58406044504	Enbrel	CA, ,ME, ,OR, VT	Miscellaneous Therapeutic Agents; Miscellaneous Therapeutic Agents (Platelet-Aggregation Inhibitors)
61958220101	Epclusa	CA, ME, OR, VT,	Antivirals
00173071920	Flovent	CA, VT	Corticosteroids
Multiple NDCs	Fluoxetine	CA, OR	Antidepressants
00054327099	Fluticasone Prop	CA, ME, VT	Respiratory Tract Agents

60505082901	Fluticasone Prop	CA, VT	Respiratory Tract Agents
69097081412	Gabapentin	CA, ME, OR, VT,	Anticonvulsants
61958190101	Genvoya	CA, OR	Antivirals
00078060715	Gilenya	CA, VT	Immunological Agents
68084011201	Glipizide ER	CA, NV	Blood Glucose Regulators
68084029521	Glipizide ER	CA, NV	Blood Glucose Regulators
68084011101	Glipizide ER	CA, NV	Blood Glucose Regulators
61958180101	Harvoni	CA, ME, VT	Anti-infective Agents
00002879959	Humalog (Kwikpen)	ME, NV, OR	Hormones and Synthetic Substitutes
00002751001	Humalog	CA, ME, OR	Hormones and Synthetic Substitutes
00074433902	Humira (Pen)	CA, ME, OR, VT,	Gastrointestinal Drugs; Miscellaneous Therapeutic Agents; Miscellaneous Therapeutic Agents (Platelet-Aggregation Inhibitors)
00074379902	Humira (Syringe)	CA, ME, OR, VT,	Gastrointestinal Drugs; Miscellaneous Therapeutic Agents; Miscellaneous Therapeutic Agents (Platelet-Aggregation Inhibitors)
00002880559	Humulin N	CA, NV	Blood Glucose Regulators
00002831501	Humulin N	CA, NV	Blood Glucose Regulators
00002831517	Humulin N	CA, NV	Blood Glucose Regulators
00002821501	Humulin R	CA, NV	Blood Glucose Regulators
00002821517	Humulin R	CA, NV	Blood Glucose Regulators
00002882427	Humulin R U-500 KwikPen	CA, NV	Blood Glucose Regulators
00002850101	Humulin R U-500	CA, NV	Blood Glucose Regulators
16729018317	Hydrochlorothiazide	CA, ME, OR, VT,	Diuretics
00406012301	Hydrocodone/Acetaminophen	ME, OR, VT,	Analgesics - Opioid
00069018921	Ibrance	CA, VT	Antineoplastics
50458014030	Invokana	CA, NV	Blood Glucose Regulators
50458014090	Invokana	CA, NV	Blood Glucose Regulators
50458014130	Invokana	CA, NV	Blood Glucose Regulators
50458014190	Invokana	CA, NV	Blood Glucose Regulators

00006057761	Janumet	CA, NV	Blood Glucose Regulators
00006057762	Janumet	CA, NV	Blood Glucose Regulators
00006057782	Janumet	CA, NV	Blood Glucose Regulators
00006057561	Janumet	CA, NV	Blood Glucose Regulators
00006057562	Janumet	CA, NV	Blood Glucose Regulators
00006057582	Janumet	CA, NV	Blood Glucose Regulators
00006027731	Januvia	CA, ME, NV, VT	Blood Glucose Regulators
00006011254	Januvia	CA, NV	Blood Glucose Regulators
00006027733	Januvia	CA, NV	Blood Glucose Regulators
00006027754	Januvia	CA, NV	Blood Glucose Regulators
00006027782	Januvia	CA, NV	Blood Glucose Regulators
00006022128	Januvia	CA, NV	Blood Glucose Regulators
00006022131	Januvia	CA, NV	Blood Glucose Regulators
00006022154	Januvia	CA, NV	Blood Glucose Regulators
00006011228	Januvia	CA, NV	Blood Glucose Regulators
00006011231	Januvia	CA, NV	Blood Glucose Regulators
00006027702	Januvia	CA, NV	Blood Glucose Regulators
00006027728	Januvia	CA, NV	Blood Glucose Regulators
00597015230	Jardiance	CA, NV	Blood Glucose Regulators
00597015237	Jardiance	CA, NV	Blood Glucose Regulators
00597015290	Jardiance	CA, NV	Blood Glucose Regulators
00597015330	Jardiance	CA, NV	Blood Glucose Regulators
00597015337	Jardiance	CA, NV	Blood Glucose Regulators
00597015390	Jardiance	CA, NV	Blood Glucose Regulators
00088222033	Lantus	ME, NV	Hormones and Synthetic Substitutes
00088221905	Lantus Solostar	CA, ME, NV, VT	Hormones and Synthetic Substitutes
00169643810	Levemir	ME, NV	Hormones and Synthetic Substitutes

00378180310	Levothyroxine Sodium	,CA, OR, VT	Hormonal Agents – Thyroid
00185060501	Lisinopril	CA, ,OR, VT	Antihypertensives
68180098103	Lisinopril	CA, ME, OR	Antihypertensives
65862020390	Losartan Potassium	CA, ,OR, VT	Antihypertensives
00071101668	Lyrica	CA, VT	Neuropathic Pain
60687014301	Metformin HCL	CA, NV	Blood Glucose Regulators
49483062350	Metformin Hcl Er	CA, VT	Blood Glucose Regulators
62037083101	Metoprolol Succinate Er	CA, ,OR, VT	Beta Blockers
Multiple NDCs	Montelukast Sodium	CA, OR	Respiratory Tract Agents, Asthma
55513019001	Neulasta	OR, VT	Blood products and modifiers (Anti-infective for chemotherapy)
00169633910	Novolog	ME, NV, OR, VT,	Hormones and Synthetic Substitutes
00052027303	Nuvaring	CA, VT	Contraceptives, Intravaginal, Systemic
61958210101	Odefsey	CA, OR	Antivirals (HIV Treatment)
55111015810	Omeprazole	ME, ,OR, VT	Gastrointestinal Drugs
00378773293	Ondansetron	CA, OR	Antiemetics
53885024510	Onetouch Ultra Test Strip	CA, VT	Blood Sugar Diagnostics
Non-matching NDCs	Orkambi	ME, VT	Respiratory Agents - Misc.
59310057922	Proair	CA, ME, OR, VT,	Beta-Adrenergic Agents
00023530105	Restasis (Multidose)	CA, ME	Eye, Ear, Nose, and Throat (EENT) Preparations
59572041028	Revlimid	CA, ME, OR	Antineoplastics
59572041000	Revlimid	CA, ME, OR	Antineoplastics
68180035302	Sertraline	CA, ME, OR, VT,	Antidepressants
69097083502	Sertraline	CA, VT, OR	Antidepressants
65862001305	Sertraline	CA, VT, OR	Antidepressants
16729000517	Simvastatin	CA, VT	Antihyperlipidemics
16714068202	Simvastatin	CA, VT	Antihyperlipidemics
16714068101	Simvastatin	CA, VT	Antihyperlipidemics

16714068201	Simvastatin	CA, VT	Antihyperlipidemics
00093715498	Simvastatin	CA, VT	Antihyperlipidemics
00093715598	Simvastatin	CA, VT	Antihyperlipidemics
16729000617	Simvastatin	CA, VT	Antihyperlipidemics
Non-matching NDCs	Spiriva (Respimat/Handihaler)	ME, VT	Autonomic Drugs; Respiratory Tract Agents
12496120803	Suboxone	ME, VT	Central Nervous System Agents; Miscellaneous Therapeutic Agents; Miscellaneous Therapeutic Agents (Platelet-Aggregation Inhibitors)
52268001201	Suprep Bowel Prep Kit	CA, OR	Gastrointestinal Agents (Colonoscopy prep)
57894006103	Stelara	CA, ME, OR, VT,	Immunological Agents
00186037020	Symbicort	CA, ME, VT	Antiasthmatic And Bronchodilator Agents
64406000602	Tecfidera	CA, ME, OR, VT,	Psychotherapeutic And Neurological Agents - Misc.
49702022813	Tivicay	CA, VT	Antivirals, Hiv-Spec, Non-Peptidic Protease Inhib
00597014030	Tradjenta	CA, NV	Blood Glucose Regulators
00597014061	Tradjenta	CA, NV	Blood Glucose Regulators
00597014090	Tradjenta	CA, NV	Blood Glucose Regulators
50111043301	Trazodone	ME, OR, VT,	Antidepressants
00169255013	Tresiba (Flextouch)	ME, NV	Hormones and Synthetic Substitutes
49702023113	Triumeq	CA, OR, VT,	Antivirals
Non-matching NDCs	Trulicity	ME, NV	Hormones and Synthetic Substitutes
61958070101	Truvada	CA, OR	HIV Treatment
61958070301	Truvada	CA, OR	HIV Treatment
00173068220	Ventolin	CA, ME, OR, VT,	Autonomic Drugs; Respiratory Tract Agents
00169406013	Victoza (3-Pak)	ME, NV, VT	Hormones and Synthetic Substitutes
50458057930	Xarelto	CA, ME, VT	Anticoagulants,Coumarin Type
54092060601	Xiidra	CA, VT	Opthalmic Agents
Non-matching NDCs	Metformin	CA, NV, OR, VT,	Blood Glucose Regulators
57894019506	Zytiga	ME, OR	Antineoplastics

Source: Mathematica analysis of data reported in: California Department of Managed Health Care (2018); Maine Health Data Organization (2018); Nevada Department of Health and Human Services (2018b); Oregon Department of Consumer and Business Services (2019); and State of Vermont Green Mountain Care Board (2019).

Notes

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[1] These states are California, Connecticut, Maine, New Hampshire, Nevada, Oregon, Washington, Texas, and Vermont. See: National Academy for State Health Policy Center for State Rx Pricing, *Newly Enacted Laws* at https://nashp.org/new-laws/, accessed Aug. 8, 2019.

[2] See: California Office of Statewide Health Planning and Development (2018), Nevada Department of Health and Human Services (2018b), Maine Health Data Organization (2018), and State of Vermont Green Mountain Care Board (2019).

[3] See: California Department of Managed Health Care (December 2019).

[4] See: Vermont Green Mountain Care Board (January 2019).

[5] See: Oregon Department of Consumer and Business Services (2019).

[6] Washington defines a covered drug as one that "is currently on the market, is manufactured by a covered manufacturer, and has a wholesale acquisition cost of more than one hundred dollars for a course of treatment lasting less than one month or a thirty-day supply, and … the manufacturer increases the wholesale acquisition cost at least … [20] percent, including the proposed increase and the cumulative increase over one calendar year prior to the date of the proposed increase [or] [50] percent, including the proposed increase and the cumulative increase over three calendar years prior to the date of the proposed increase." See: Washington HB 1224/Chapter 334 (2019), Section 2.

[7] A number of other states recently passed (but have not yet enacted) legislation that would require PBM reporting. Such states include Arkansas, Iowa, Louisiana, and Minnesota. These states variously would require PBM reporting of total rebates (all states); rebates retained by the PBM (Minnesota—like Nevada, Texas, and Washington); rebates the PBM did (or did not) pass through to insurers (Arkansas, Iowa, Louisiana, and Minnesota—like Connecticut and Texas); rebates passed through to enrollees at point of sale (Arkansas—like Texas); the amount paid for pharmacy services (Arkansas—like Washington); administrative fees received by the PBM (Iowa and Louisiana); and the highest, lowest, and mean aggregate retained rebate percentage (Iowa, Louisiana, and Minnesota). See: Arkansas SB 520/Act No. 994 (2019); Iowa SF 563 (2019), Louisiana SB 283/Act No. 371 (2018); and Minnesota SF 278/Session Law Chapter 39 (2019).

[8] Nevada's report notes that the variation among manufacturers (and potentially among drugs produced by the same manufacturer) is significant: a simple unweighted average per manufacturer, then calculated across manufacturers, produced an average profit of 152 percent of the sum of production and administrative cost—that is, for every dollar spent on combined production and administrative costs, the manufacturers earned, on average, $1.52 in profit. The report states that larger manufacturers (with lower profit rates) tend to reduce the aggregate profit ratio, as calculated in Figure 1.

[9] Built on the National Academy for State Health Policy's model legislation, Maryland's Prescription Drug Affordability Board is an independent body with the authority to review high-cost prescription drugs and identify fair, appropriate rates for Marylanders to pay.

[10] To obtain consistent information from all reporting entities, NASHP's model legislation and reporting templates call for reporting at the NDC level, and they align national and state-level reporting to support a coherent picture of pricing along the supply chain for each drug. See: https://nashp.org/policy/prescription-drug-pricing/model-legislation/#toggle-id-1, accessed Aug. 9, 2019.