



Prescription Drug Use and Spending in Minnesota - A Data Short Take -

Health Economics Program

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What Is In This Data Short Take?

This data short take presents a **number of use cases** generated from newly released public use files (PUFs) on prescription drug use & spending in Minnesota.

These and other PUFs have been derived from **the Minnesota All Payer Claims Database**, a repository of health care claims data that supports statewide analyses of health care costs, quality, and utilization.

PUFs are available from the Health Economics Program by download at: www.health.state.mn.us/data/apcd/publicusefiles/

Background on Prescription Drugs

- Retail prescription drug spending in Minnesota has exceeded \$4.5 billion each year since 2012¹
- Spending is rising at a rate much higher than growth in number of prescriptions²
- There has been a lack of detailed data on the prescription drug market, in general, and particularly at the state level
- The prescription drug public use files (PUFs) are intended to:
 - Enhance price transparency
 - Inform stakeholders about patterns of prescription drug use in Minnesota
 - Contribute to the development of policy solutions

Prescription Drug PUF Designs

- Two prescription drug PUFs, each including 2012 and 2016 data, are aggregated at different levels:
 - *Summary* file (non-proprietary drug name level)
 - *Detail* file (NDC level)
- PUFs are restricted to:
 - Retail pharmacy claims (i.e., exclude drugs processed in medical claims)
 - Prices before rebates and absent coupons or other discounts
 - Data on Minnesota residents

PUF Metrics Illustrated In This Data Short Take

- Ranking of drugs by prescription volume, prescription cost, and total spending
- Trends in drug cost over time (2012 to 2016)
- Distribution of drug spending by payer/patients
- Demographic characteristics of patients with a given prescription
- Comparison of drug costs between brand & generic products
- Annual drug cost and supply metrics across payers

Ranking of Retail Prescriptions: Commercial Market (2016)

Rank	Volume of Prescriptions	Cost per Prescription	Total Spending
1	Levothyroxine Sodium	Antihemophilic Factor, Human Recombinant	Adalimumab
2	Lisinopril	Repository Corticotropin	Etanercept
3	Atorvastatin Calcium	Ledipasiver, Sofosbuvir	Insulin Glargine
4	Amoxicillin	Icatibant Acetate	Glatiramer Acetate
5	Sertraline HCL	Sofosbuvir	Insulin Aspart
6	Simvastatin	Dasabuvir, Ombitasvir, Paritaprevir, Ritonavir	Interferon Beta-1a
7	Albuterol Sulfate	Trientine HCL	Insulin Lispro
8	Omeprazole	Velpatasvir, Sofosbuvir	Fluticasone Propionate, Salmeterol
9	Metformin HCL	Selexipag	Glucose Blood
10	Hydrocodone Bitartrate, Acetaminophen	Daclatasvir	Dimethyl Fumarate

Ranking of Retail Prescriptions: Medicare (2016)

Rank	Volume of Prescriptions	Cost per Prescription	Total Spending
1	Lisinopril	Repository Corticotropin	Insulin Glargine
2	Levothyroxine Sodium	Icatibant Acetate	Insulin Aspart
3	Atorvastatin Calcium	Ledipasiver, Sofosbuvir	Ledipasiver, Sofosbuvir
4	Omeprazole	Sofosbuvir	Fluticasone Propionate, Salmeterol
5	Simvastatin	Dasabuvir, Ombitasvir, Paritaprevir, Ritonavir	Lenalidomide
6	Amlodipine Besylate	Velpatasvir, Sofosbuvir	Adalimumab
7	Furosemide	Daclatasvir	Aripiprazole
8	Warfarin Sodium	Selexipag	Tiotropium Bromide Monohydrate
9	Gabapentin	Lumacaftor, Ivacaftor	Rosuvastatin Calcium
10	Metformin HCL	Elbasvir, Grazoprevir	Glatiramer Acetate

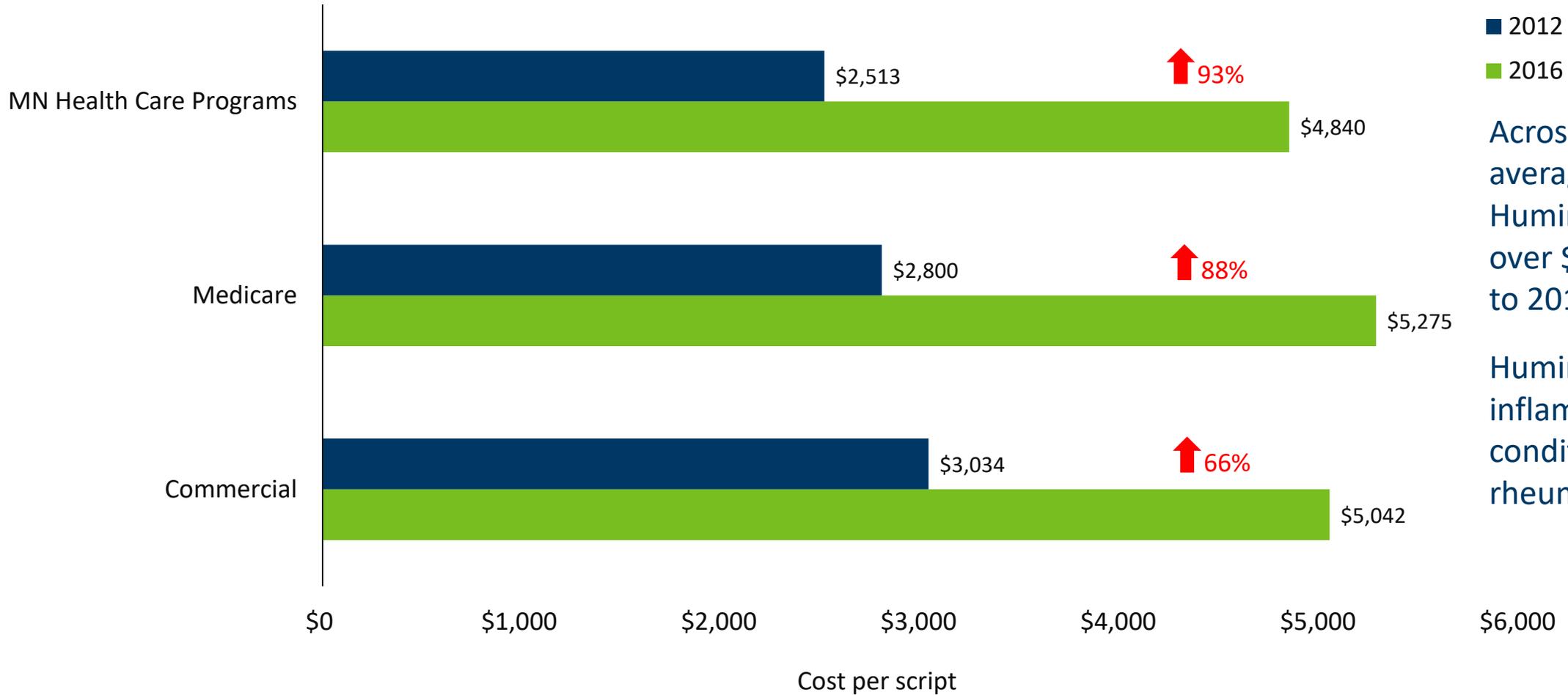
Ranking of Retail Prescriptions: Minnesota Health Care Programs (2016)

Rank	Volume of Prescriptions	Cost per Prescription	Total Spending
1	Albuterol Sulfate	Ledipasiver, Sofosbuvir	Ledipasiver, Sofosbuvir
2	Omeprazole	Sofosbuvir	Adalimumab
3	Lisinopril	Dasabuvir, Ombitasvir, Paritaprevir, Ritonavir	Insulin Aspart
4	Gabapentin	Velpatasvir, Sofosbuvir	Insulin Glargine
5	Levothyroxine Sodium	Daclatasvir	Aripiprazole
6	Cholecalciferol	Lumacaftor, Ivacaftor	Methylphenidate HCL
7	Sertraline HCL	Elbasvir, Grazoprevir	Etanercept
8	Ibuprofen	Ustekinumab	Glucose Blood
9	Amoxicillin	Everolimus	Albuterol Sulfate
10	Metformin HCL	Palbociclib	Dextroamphetamine Sulfate /Saccharate, Amphetamine Sulfate/Aspartate

Ranking of Retail Prescriptions: Statewide (2016)

Rank	Volume of Prescriptions	Cost per prescription	Total Spending
1	Levothyroxine Sodium	Antihemophilic Factor, Human Recombinant	Adalimumab
2	Lisinopril	Repository Corticotropin	Insulin Glargine
3	Atorvastatin Calcium	Icatibant Acetate	Insulin Aspart
4	Omeprazole	Ledipasiver, Sofosbuvir	Etanercept
5	Simvastatin	Sofosbuvir	Ledipasiver, Sofosbuvir
6	Metformin HCL	Trientine HCL	Glatiramer Acetate
7	Amlodipine Besylate	Dasabuvir, Ombitasvir, Paritaprevir, Ritonavir	Fluticasone Propionate, Salmeterol
8	Albuterol Sulfate	Velpatasvir, Sofosbuvir	Aripiprazole
9	Gabapentin	Daclatasvir	Insulin Lispro
10	Sertraline HCL	Selexipag	Lenalidomide

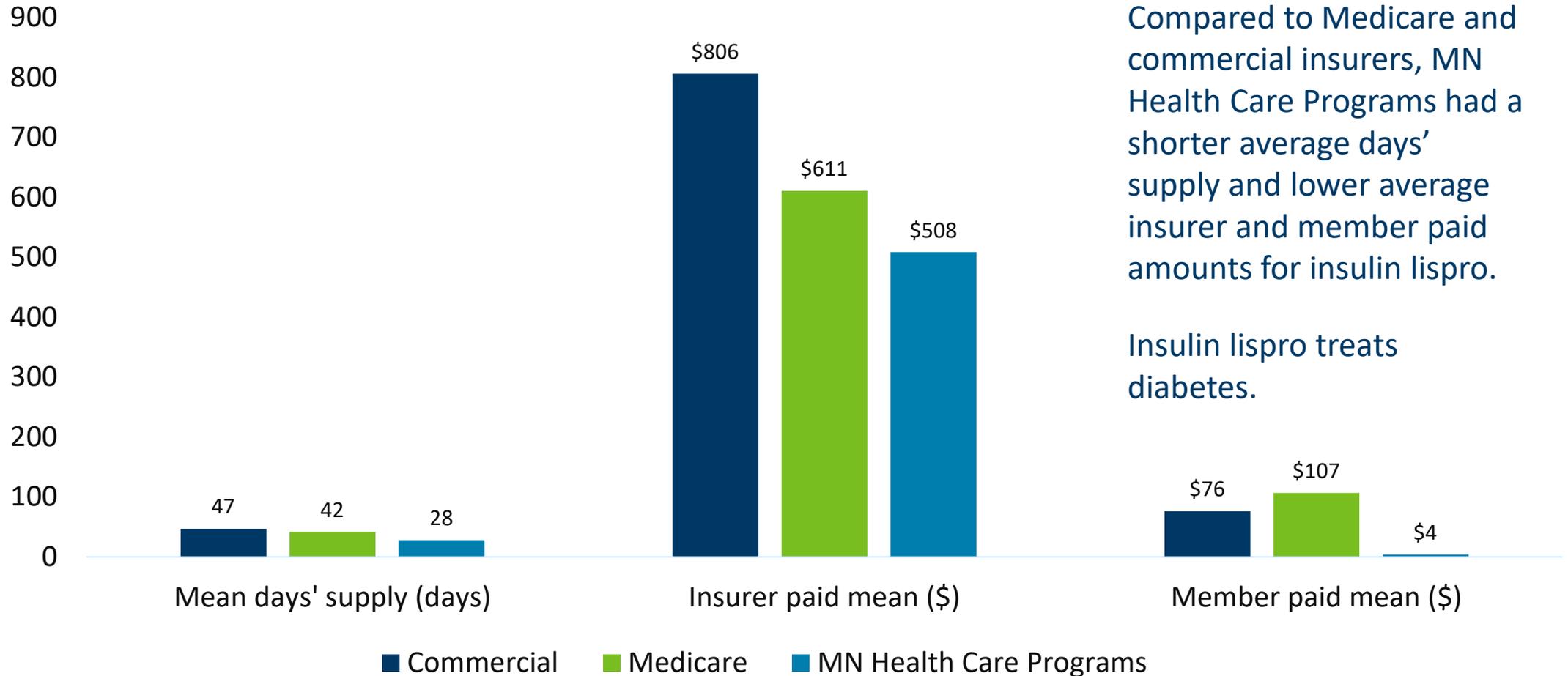
Growth in the Five-Year Cost per Script of Humira by Payer



Across all payers, the average price of Humira increased by over \$2,000 from 2012 to 2016.

Humira treats inflammatory conditions such as rheumatoid arthritis.

Cost Sharing by Payer for Insulin Lispro (2016)



Compared to Medicare and commercial insurers, MN Health Care Programs had a shorter average days' supply and lower average insurer and member paid amounts for insulin lispro.

Insulin lispro treats diabetes.

Demographics of Commercially Insured Individuals Prescribed Epinephrine (2016)

Patient characteristic	% of Scripts
Age	
<19 years	49.4%
19 to 44 years	22.1%
45 to 64 years	25.4%
65+ years	3.1%
Sex	
Female	52.8%
Male	47.2%
RUCA class	
Urban core	73.3%
Suburban	12.1%
Micropolitan	6.4%
Rural/small town	8.2%

Children and adolescents under the age of 19 years accounted for almost half of all epinephrine prescriptions despite representing roughly one quarter of Minnesota's population.

Epinephrine treats asthma attacks and allergic reactions.

Cost of Atorvastatin Calcium by Manufacturer among Commercially Insured Individuals (2016)

The average cost of brand name atorvastatin calcium was over 30 times the cost of the same generic prescription.

Pfizer
(brand)

➔ \$446.69 per prescription

Atorvastatin calcium treats high cholesterol and lipid levels.

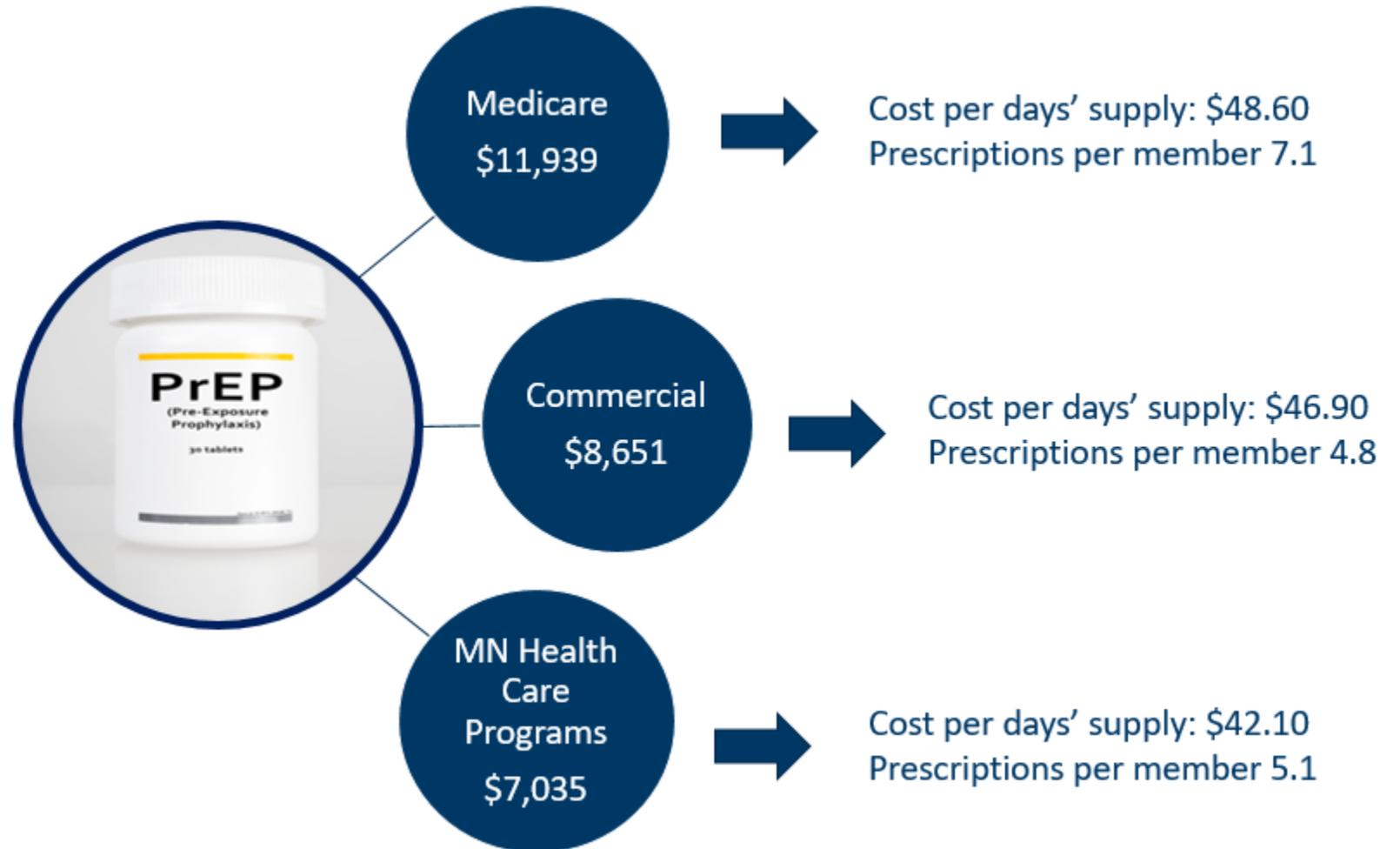
Apotex
(generic)

➔ \$13.20 per prescription

Annual Cost Per User of Truvada by Payer (2016)

Compared to individuals covered by commercial insurance or MN Health Care Programs, individuals on Medicare averaged more prescriptions of Truvada annually at a higher cost per days' supply.

Truvada treats HIV infections and is used as a pre-exposure prophylaxis to prevent HIV infection.



Contact and Other Information

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HEP Home Page: www.health.state.mn.us/health/economics

Minnesota All Payer Claims Database (MN APCD): www.health.state.mn.us/data/apcd/

Public Use Files from the MN APCD: www.health.state.mn.us/data/apcd/publicusefiles/