

HIV

Background, new developments, key strategies

INTRODUCTION

Human Immunodeficiency Virus (HIV) is the virus that can lead to Acquired Immunodeficiency Syndrome, or AIDS. No safe and effective cure for HIV currently exists, but with proper medical care, it can be controlled.¹

- **1.2 million** people in the United States were living with HIV at the end of 2011 (most recent data).²
- **14% do not know** they are infected.²
- New infections have **remained at about 50,000 per year** for over a decade.³
- **13,712 people** diagnosed with AIDS died in 2012 in the US.²

Estimated lifetime cost of care for one HIV/AIDS patient



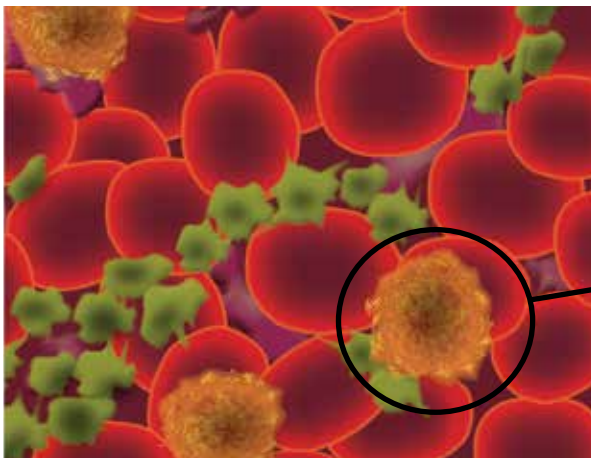
Up to \$402,000

Truven Health Analytics. Impact of Pharmaceutical Innovation in HIV/AIDS Treatment. December 2014.

HIV WORKS BY DESTROYING THE BODY'S DEFENSES

A human CD4 T-cell infected by numerous HIV particles

The HIV virus inserts itself into healthy immune system cells and then uses the cell to manufacture new HIV virus that can infect other immune cells. This process ends up by destroying most of the body's functioning immune cells. Eventually, the body can't fight off infections and the HIV infection leads to AIDS plus other, opportunistic infections.¹



Human blood with red blood cells, T-cells (orange) and platelets (green)*

Based on image source: NIAID via amfAR: Boosting Killer T cells to Eliminate HIV Reservoirs. Feb. 12, 2015.

* Colors enhanced for clarity.

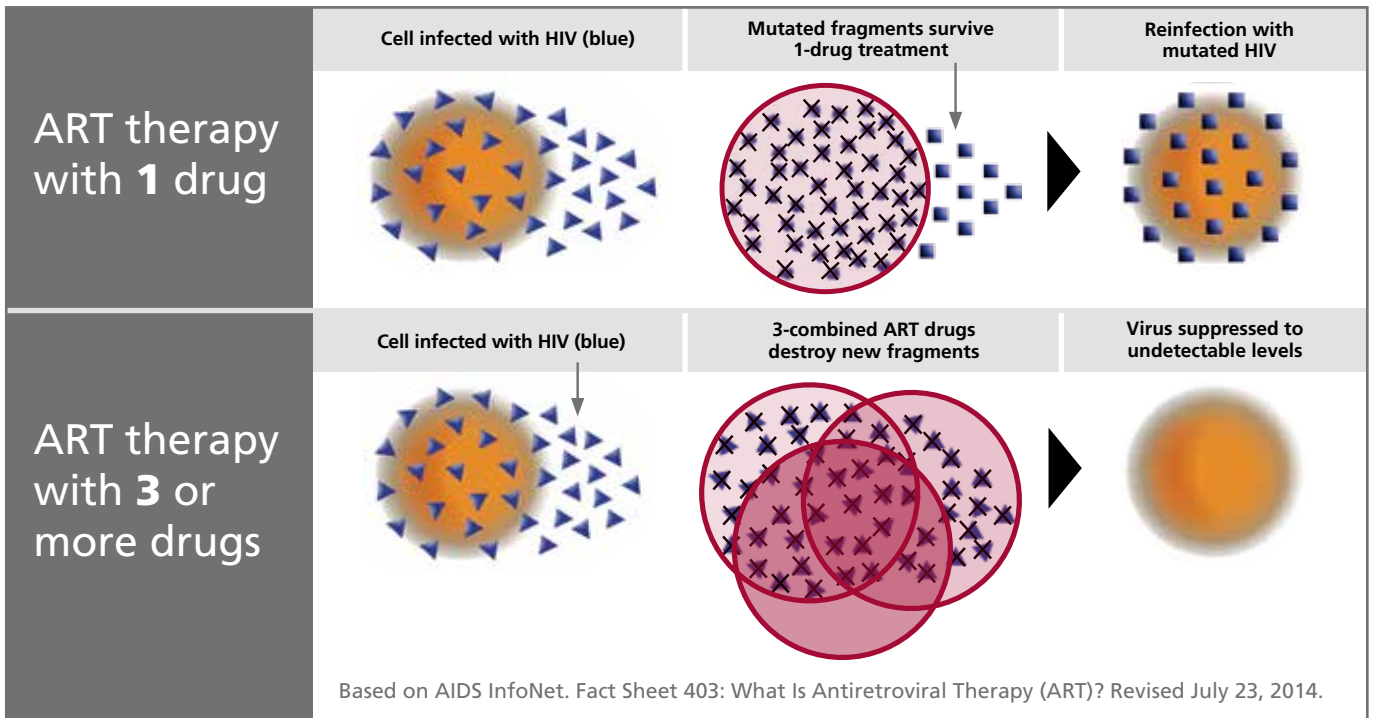


T-cell
HIV particles in yellow*

Adapted from National Institutes of Health. Life: Magnified. April 02, 2015.

TREATMENT

Today, treatment for HIV involves antiretroviral therapy or ART. HIV mutates quickly; attacking with 1 drug allows it to evade destruction and build resistance. Therefore, best-practice calls for ART drugs taken in combination to suppress the growth of the virus.⁴



EFFECTIVE TREATMENTS MEAN FEWER DEATHS AND GREATER PREVALENCE OF THE DISEASE



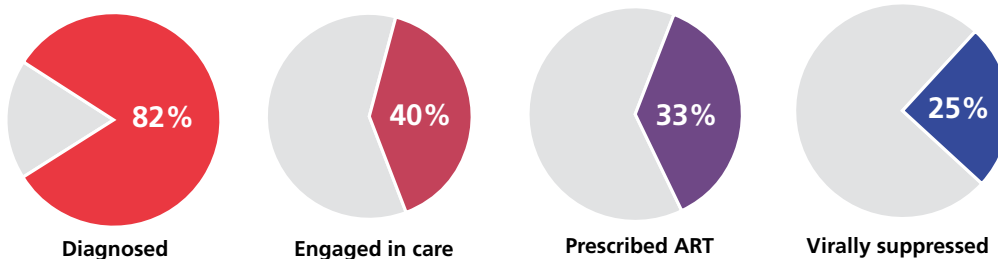
National Institute on Drug Abuse. July 2012 at: <http://www.drugabuse.gov/longdesc/estimated-persons-living-hiv-infection-diagnosed-undiagnosed-estimated-aids-deaths-among-adults-ado> on 06.02.2015

ACCESS AND ENGAGEMENT IN CARE

HIV Care Continuum

Testing and care engagement lacking

PERCENT OF ALL PEOPLE LIVING WITH HIV



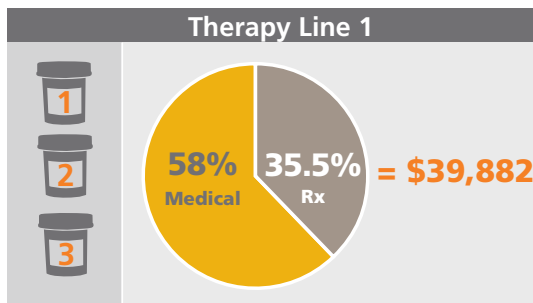
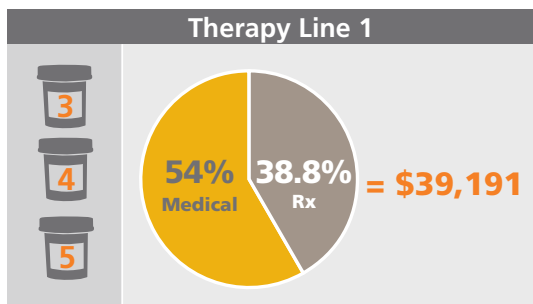
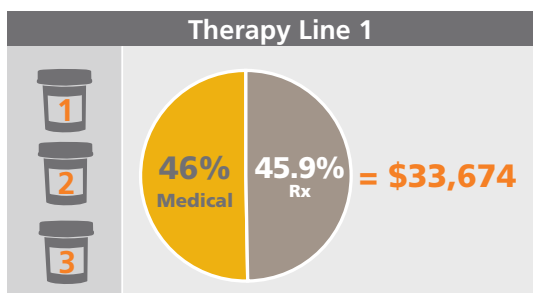
CDC. Vital Signs: HIV Diagnosis, Care, and Treatment Among Persons Living with HIV – United States, 2011. MMWR. 2014, 63(47): 1113-1117

UNDERSTANDING TREATMENT COSTS

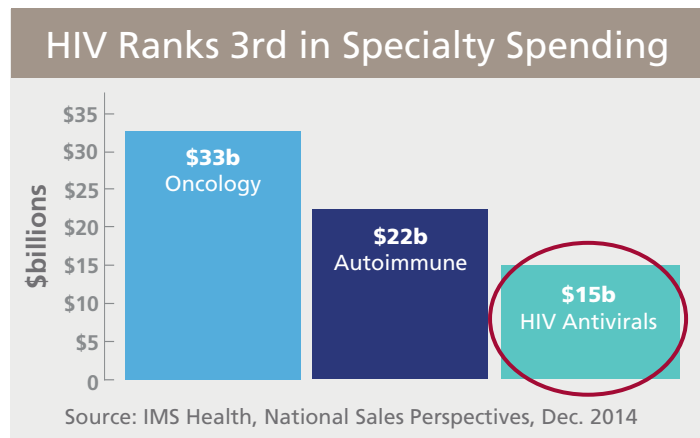
The average monthly cost for the top 5 HIV drugs is \$1,400 per month, compared to \$3,000 per month for all specialty drugs.^{5,6} So, while not the most expensive specialty drugs, medications used to treat HIV/AIDS can still be costly, since HIV treatments are required for life.

Cost of Direct Medical Care for HIV/AIDS

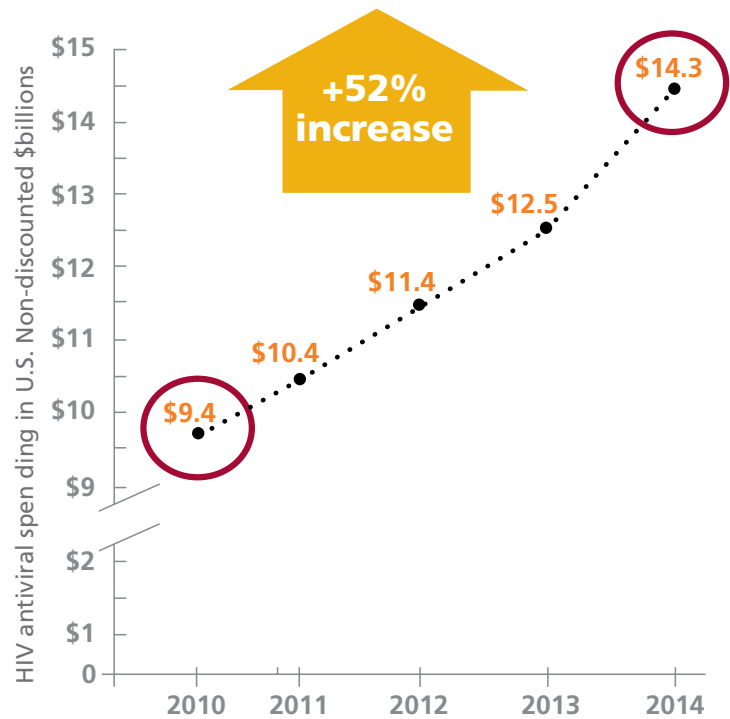
People switch from one "line" or combination of drugs to another because they develop a resistance, or they are unable to tolerate a particular drug or combination of drugs.⁷



PLOS ONE. Cost of Treatment in a US Commercially Insured, HIV-1 – Infected Population. May 2014. Volume 9, Issue 5, e98152



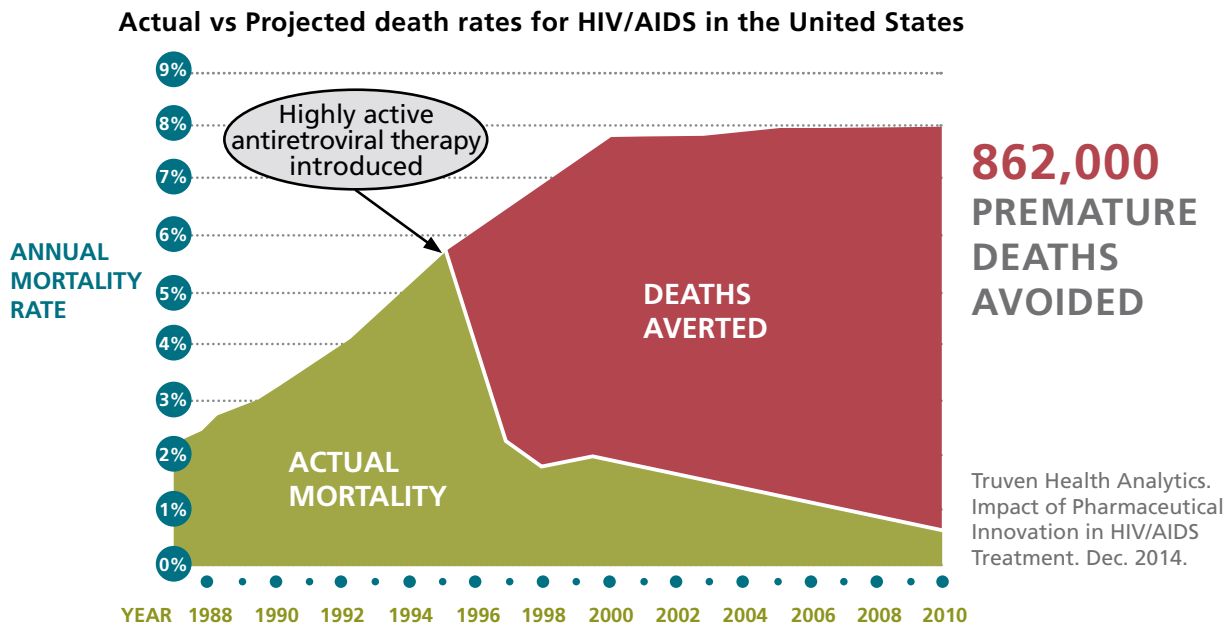
ART Price Growth: Steady & Strong



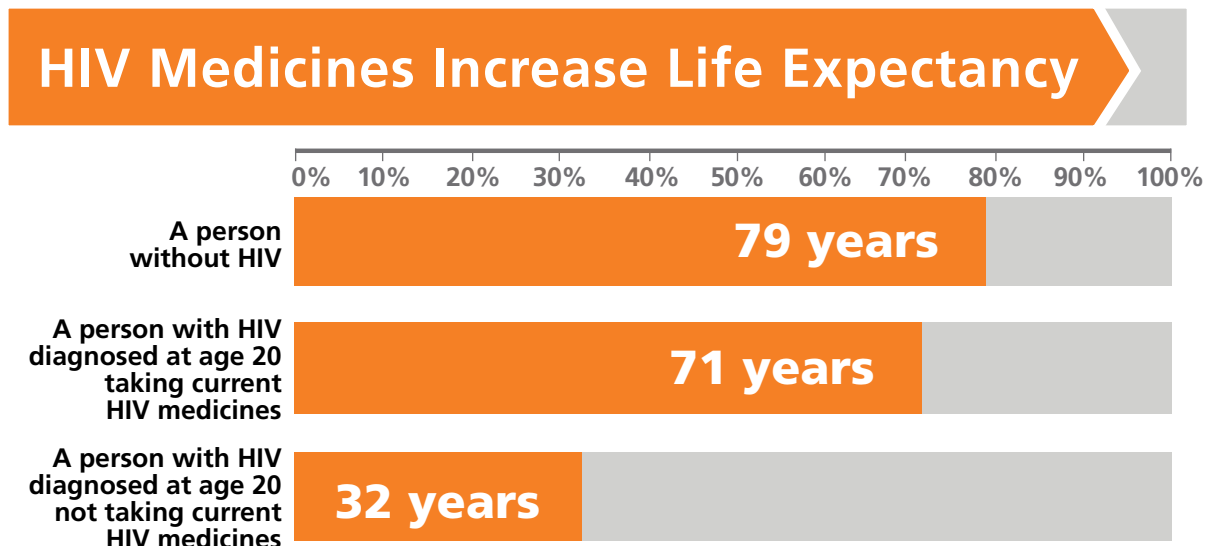
IMS Health, Medicines Use and Spending Shifts. April, 2015.

TREATMENT COSTS, BUT ALSO PAYS

Despite their high cost, studies have shown early use of combination treatments to be cost-effective.⁷



ART therapies are helping people live longer, more productive lives:



National Vital Statistics Reports, 2012; PLoS One, 2013; and Journal of the American Medical Association, 1993.

STILL NEEDED: A CURE OR VACCINE

Some experts worry about the growing cost of ART given the length of treatment. The total year-over-year cost of therapy will continue to rise – perhaps to unsustainable levels.⁸

THE END OF HIV?

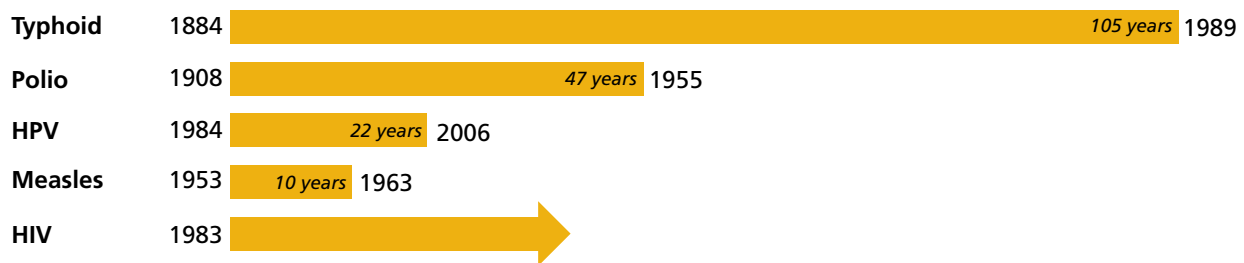
No major viral epidemic has ever been brought under control without a vaccine.⁹

Many argue that finding an HIV vaccine represents the world's best long-term hope for breaking the chain of HIV infection and ending AIDS.¹⁰

HIV is an extremely difficult target for a vaccine. The virus comes in many varieties and can escape the immune system by mutating rapidly. While vaccination studies began in 1987, to date, none has proven effective against HIV. Still, creating safe and effective vaccines is rarely a quick or simple process:

Time to develop a vaccine

Duration between discovery of microbiologic cause of selected infectious diseases and development of a vaccine



AVAC AIDS Vaccine Handbook

A breakthrough?

In 2009 a human trial in Thailand called **RV144** demonstrated for the first time that a vaccine could reduce infection rates.¹¹

Today there are many vaccines under development, including some that build directly on the RV144 results. Some are in human trials now; others will be soon.

Decades of Failure – then sudden progress



New England Journal of Medicine. The Quest for an HIV-1 Vaccine — Moving Forward. 2013; 369:2073-2076 November 28, 2013 DOI: 10.1056/NEJMp1312711.

The number of aids vaccine trials underway (2015)

Vaccine strategies in clinical trial (2015)*



*Select vaccine strategies in ongoing clinical trials. Some strategies studied in more than one ongoing trial. AVAC Prevention Research & Development Database, 2015

While prevention and treatment with ART drugs have helped, we are still far from stopping the spread of HIV. Ultimately, the only guarantee of an end to the AIDS pandemic is the combination of prevention methods and a safe and effective HIV vaccine.¹²

SPECIALTY MANAGEMENT PROGRAM

Integrated management allows for consistent management and holistic care coordination.

A Holistic Care Management Approach

		
Personal Care Team	Physician Coordination	Adherence Support
<p>Personally dedicated clinician coordinates with nurses, doctors other services</p> <ul style="list-style-type: none"> • Dedicated to specific conditions • Behavior health support • Empathy training 	<p>Physician outreach, interaction and involvement</p> <ul style="list-style-type: none"> • Side effect management • Missed refill notifications • Care plan summaries 	<p>Helping to ensure members have what they need to take their drugs on time, as directed</p> <ul style="list-style-type: none"> • Pharmacist counseling • Refill reminders • Educational materials

Managing the Total Cost of Complex Conditions

		
Appropriate Use	Benefit Management	Drug Cost and Choice
<p>Limiting waste of expensive specialty drugs</p> <ul style="list-style-type: none"> • Quantity management • Prior authorization • Genetic testing 	<p>Making an impact with Specialty Pharmacy Management Programs:</p> <ul style="list-style-type: none"> • Adherence • Increased medical savings 	<p>Driving lower cost options:</p> <ul style="list-style-type: none"> • Tier 2 options – all conditions • Step therapy • Price protection

MEET BRENDA

Brenda was diagnosed with HIV 5 years ago. She is working hard to stay compliant with her ART medication regimen. Brenda transitioned into our Specialty Pharmacy Program shortly after her employer switched to OptumRx. She has the advantage of our advanced customer service model that continuously monitors her condition.

What does it mean to manage the **total cost of Brenda's condition?**



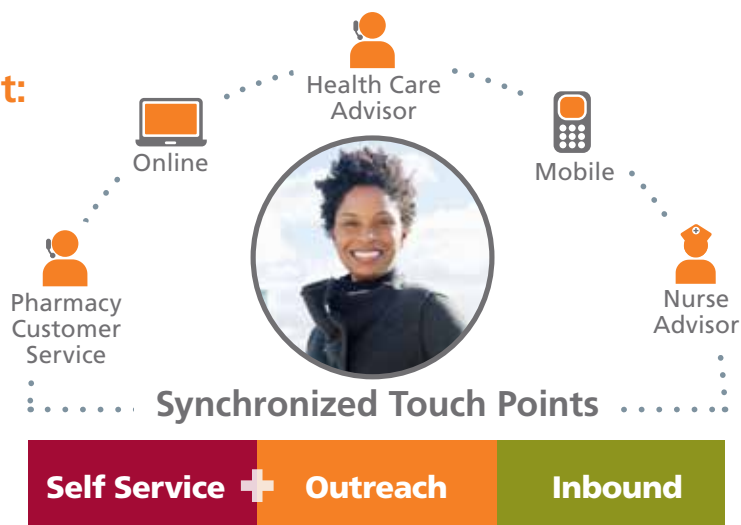
Synchronize member touch points and data into **ONE system.**

Opportunities		Traditional PBM	OPTIMIZED*	OptumRx Connected Care
1	Adherence Programs	NOT OPTIMIZED	✓	A traditional PBM looking only at pharmacy claims or pharmacy solutions can miss opportunities. Our ONE team approach manages multiple consumer touch points to promote real behavior change, like lower cost alternatives, medication adherence or engagement in clinical management programs.
2	Clinical Management Program	NOT OPTIMIZED	✓	
3	Healthy lifestyle programs to encourage condition-appropriate exercises and diet	MISSED	✓	
4	Manage co-morbid depression with synchronized behavioral referrals	MISSED	✓	

* The synchronized care management model described here depends on a minimum specific set of OptumHealth care management services, plus OptumRx pharmacy services. Please speak to your OptumRx or UnitedHealthcare representative for more information about how synchronization can work for you.

Connected Engagement:

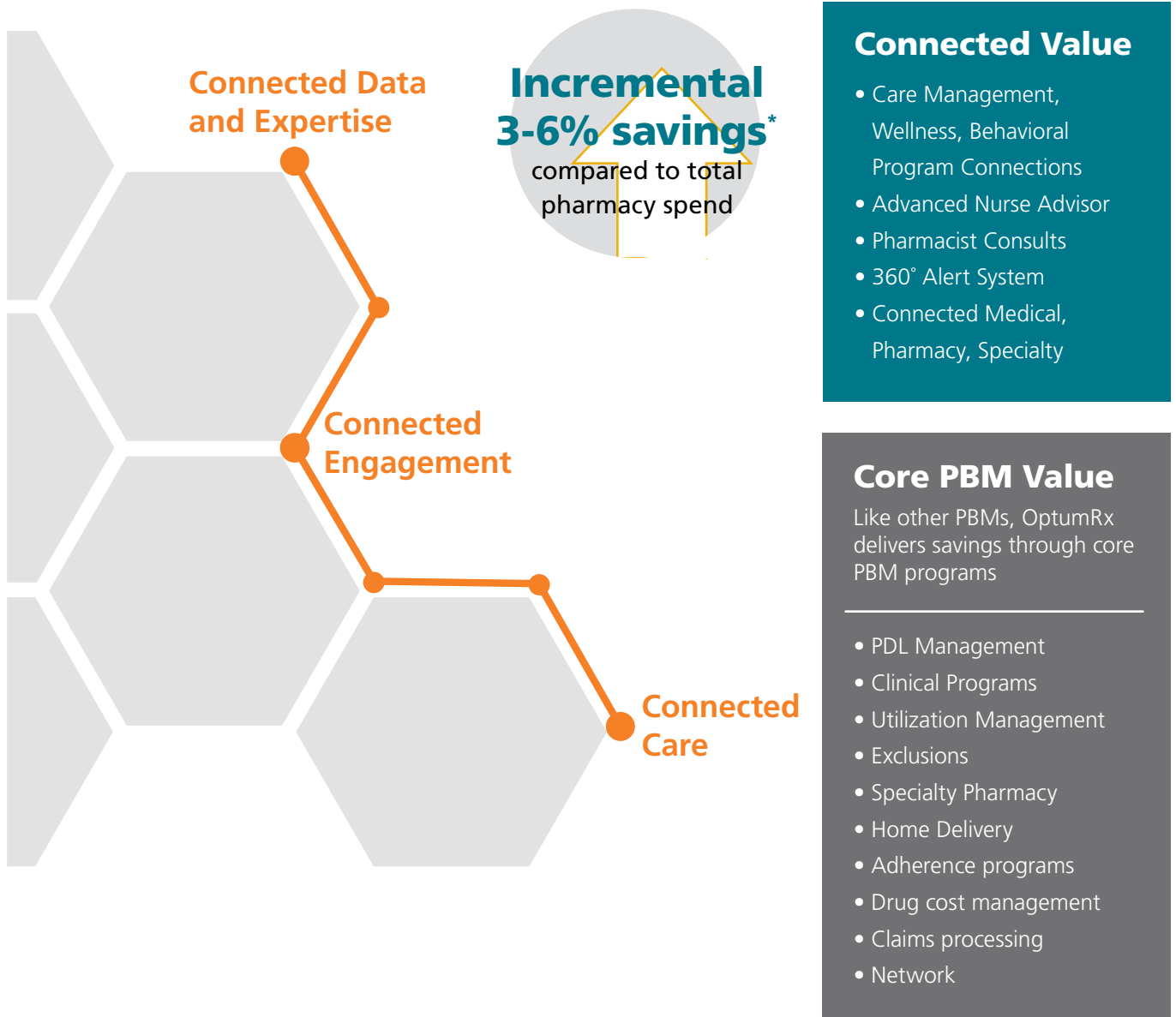
Every interaction is an opportunity to reduce health risk and lower costs



MANAGING COSTS WITH CONNECTED CARE

Traditional PBM's do an adequate job of negotiating discounts, paying claims, managing formularies and so on. But OptumRx is more than a traditional PBM: **We are a complete pharmacy care services company.**

We focus on managing total condition spending by **connecting** pharmacy's impact across all benefits.



*Estimated additional savings over traditional core PBM services based on total pharmacy spend. Illustrative only; results may vary.

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For more information about how you can manage the cost of HIV, please contact your OptumRx representative.



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