

Predictive analytics and personalized care

The **Next Best Action** strategy incorporates our uniquely unified data infrastructure with the advanced analytics of **OptumIQ™** to rank-order the self-care options we offer to members. This **significantly increases patient engagement**, which translates into **higher aggregate medical expense savings** for clients.



Next Best Action leverages advanced predictive analytics technology to enable call center agents to make actionable, data-driven decisions at an individual member level.

The strategy prioritizes interventions according to:

- The **clinical value** of that engagement opportunity
- An individual's **propensity to take action** on it

Two Patients, One Diagnosis, Two Courses of Care.

Two patients call with **same symptoms**:

- Lower back pain
- Signs of chronic obstructive pulmonary disease (COPD)



Past Experience

Traditionally, we would prioritize the treatment with the **highest clinical value**.

\$500 Expected clinical value of treating back injury

\$750 Expected clinical value of treating COPD

With **OPTUM IQ**™

Our NEW Way

With OptumIQ, the Next Best Action strategy leverages advances in machine learning, deep learning and rules-based models to customize the recommended treatment for each patient based on:

- Attitudinal data
- Clinical data
- Behavioral data
- Demographic data
- Geographic data
- Medical claims
- Pharmacy claims
- Psychographic data
- Response data
- Technographic data

Jack



- 40 year old truck driver
- Smoker and says his grandfather smoked and lived to 100, so not inclined to quit
- Open to all treatments and just wants to get back to work

Jill



- 65 year old
- New grandmother
- Wants to quit smoking since she will be spending a lot of time babysitting grandchild
- Back hurts but says pain is manageable

Employing principles from the emerging field of behavioral economics, the **Next Best Action strategy** uses this personal data to determine the likelihood Jack and Jill will accept a given engagement option.

Propensity to accept physical therapy for back:

Jack	Jill
• 85%	• 15%

Propensity to enroll in smoking cessation programs:

• 5%	• 75%
------	-------

Weighing both total cost of care and propensity to accept, the model then presents a range of options to the advocacy team.

Jack's ranked offers are unique to him, while Jill's are unique to her:

Options for Jack

1. Physical therapy
2. Smoking cessation

Options for Jill

1. Smoking cessation
2. Physical therapy

The best course of action for each individual, determined by the model, is listed first. **Even though treating COPD has the greatest economic value, it's not the best option for Jack because he is more unlikely to stop smoking.**

Unique among PBMs, OptumRx has created a unified data infrastructure. This multidirectional flow of data originates from many sources including payers, members, providers and drug manufacturers.

With OptumIQ, our Pharmacy Care Services is capable of capturing, structuring and analyzing this data, which enables us to better understand and engage each member.



Learn more about the Next Best Action Strategy



OptumRx specializes in the delivery, clinical management and affordability of prescription medications and consumer health products. We are an Optum[®] company — a leading provider of integrated health services. Learn more at [optum.com](https://www.optum.com).

All Optum trademarks and logos are owned by Optum, Inc. All other trademarks are the property of their respective owners.

M54610-RR.5 © 2018 Optum, Inc. All rights reserved.