



Transforming Healthcare delivery and Health Insurance through Technology

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1. Background

Current trends and challenges in the healthcare industry

2. The Opportunities

Leveraging digital health technologies to accelerate transformation of health insurance and healthcare

3. Results

Technology has the potential to drive superior health insurance performance and improve healthcare delivery



Key relevant global health care trends

Covid has exposed the cracks in health systems across the world

Cost inflation

Ageing population

Increased incidence of chronic diseases

Accelerated adoption of high-cost technology



Outdated private health insurance models

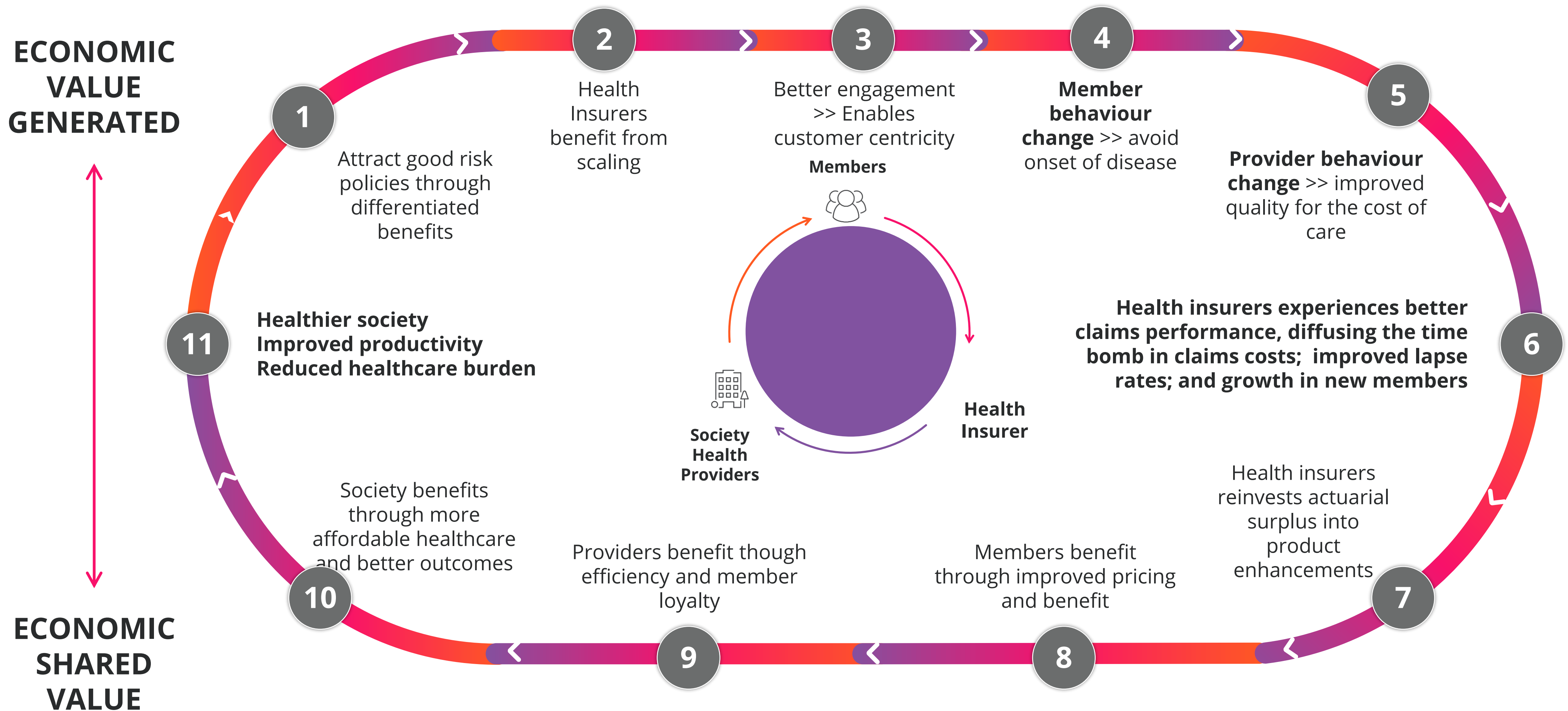
Supply/ workforce shortage

Convergence of offline and online



These trends increase the relevance of the Shared Value Model in healthcare

The nature of risk is behavioural





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Technology driven transformation across the health insurance value chain



INCREASED NEW BUSINESS | IMPROVED OPERATIONAL EFFICIENCY | MEDICAL COST OPTIMISATION

Attract a disproportionate share of young and healthy lives

Use rich datasets to underwrite risk accurately and price appropriately, and leverage D2C capabilities for sales

Incentivise members to increase their healthy behaviour through Vitality programs

Reduce claims costs through procurement and network design, and align quality outcomes through value-based care payment arrangements

Structure incentives and member engagement to drive selective retention of young and healthy lives

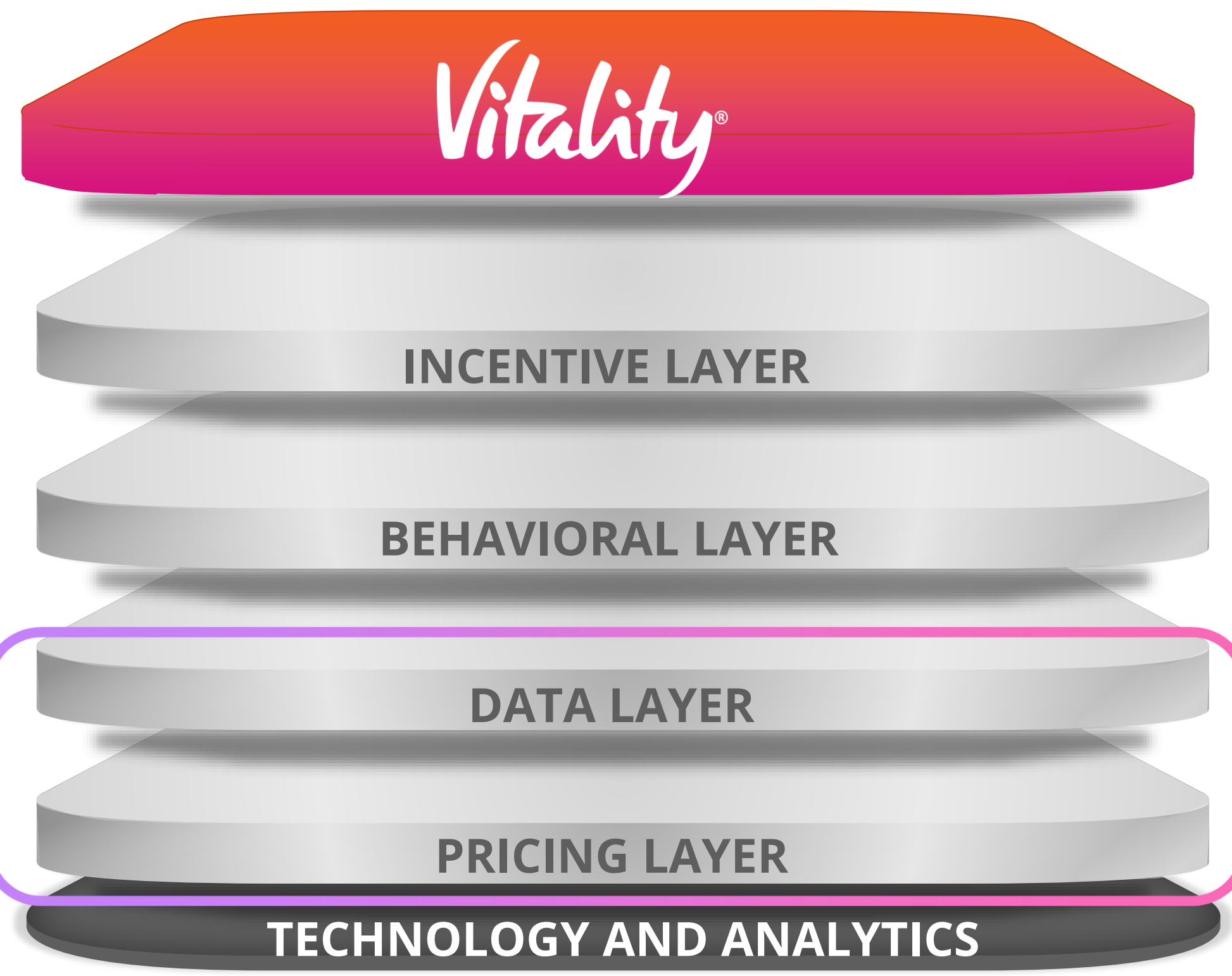


Validity | A behaviour change and engagement platform with curated programs, rewards & partners integrated with other health technology to deliver a comprehensive health and wellbeing ecosystem

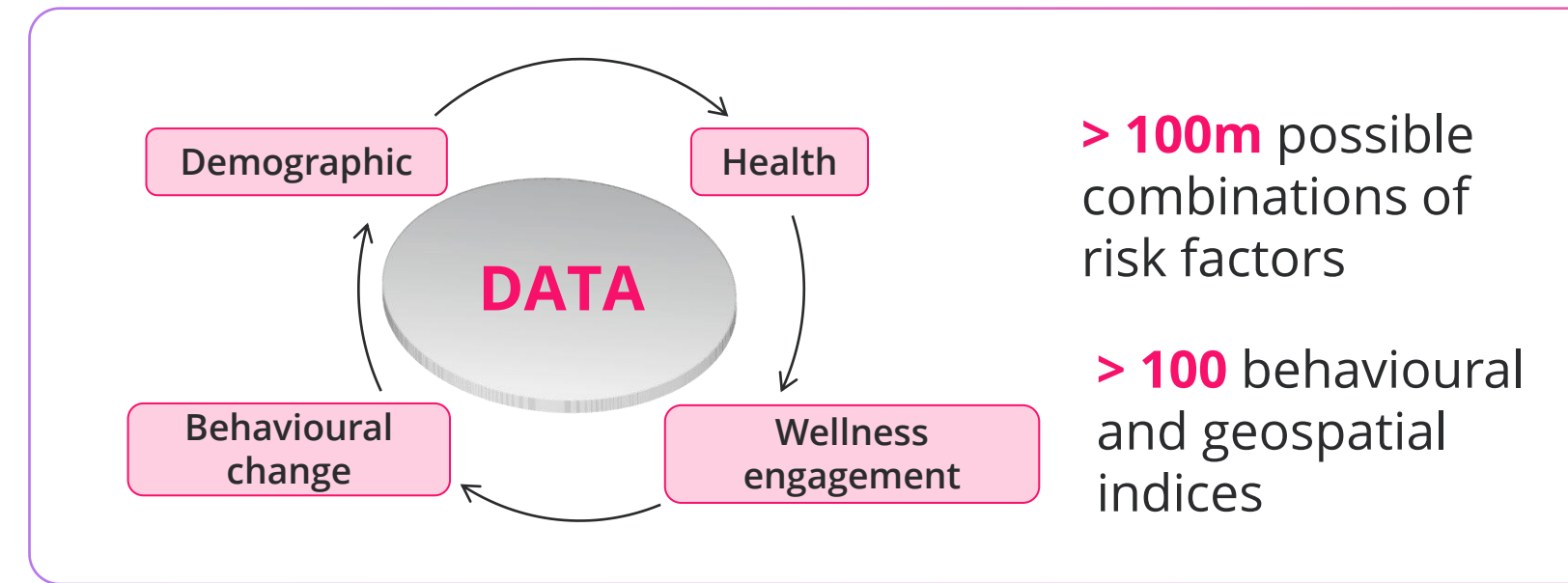




A well- designed behaviour change platform is effective at attracting and retaining a good risk pool and can facilitate effective pricing & underwriting through accurate prediction of customer behaviour

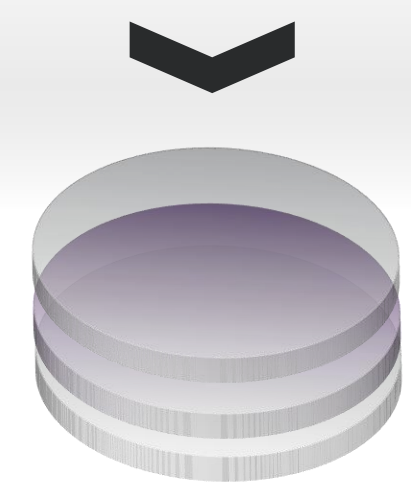


Data rich, AI based underwriting



> 100m possible combinations of risk factors

> 100 behavioural and geospatial indices

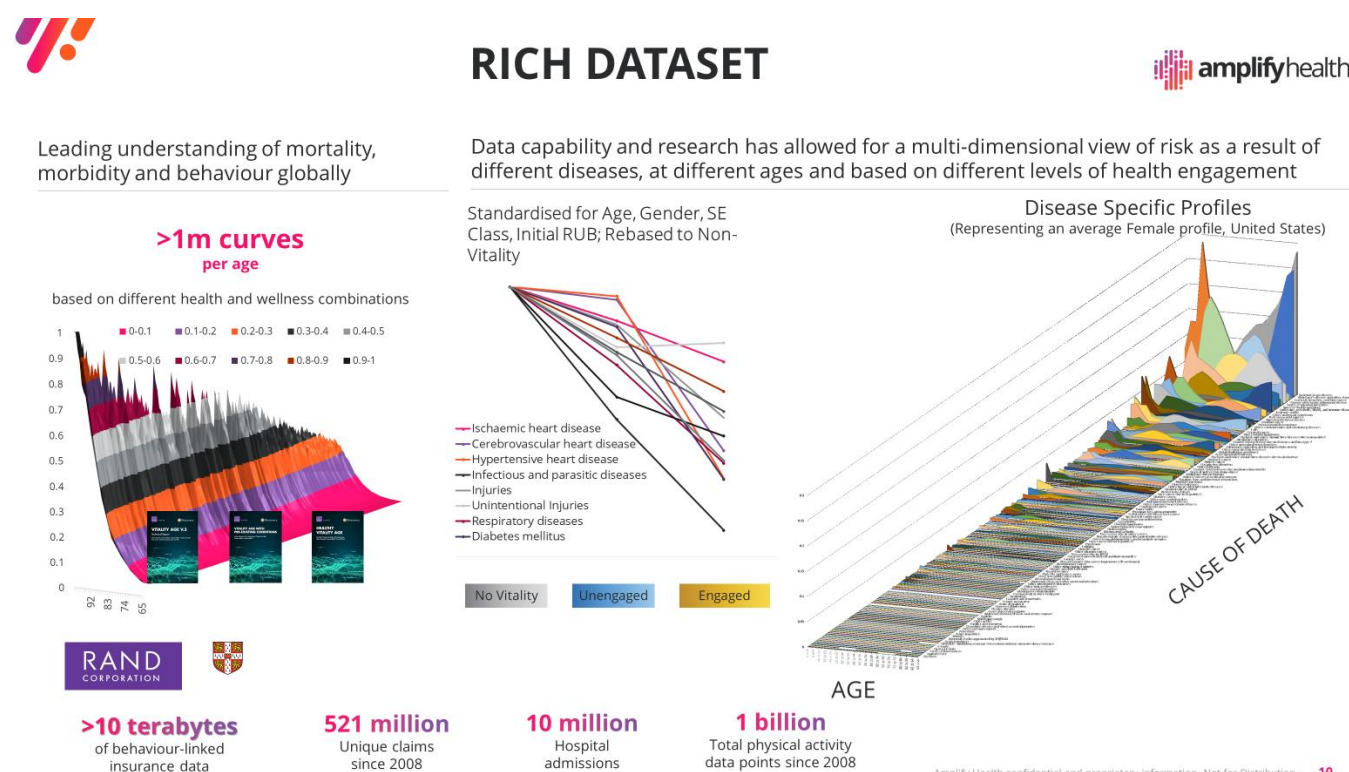
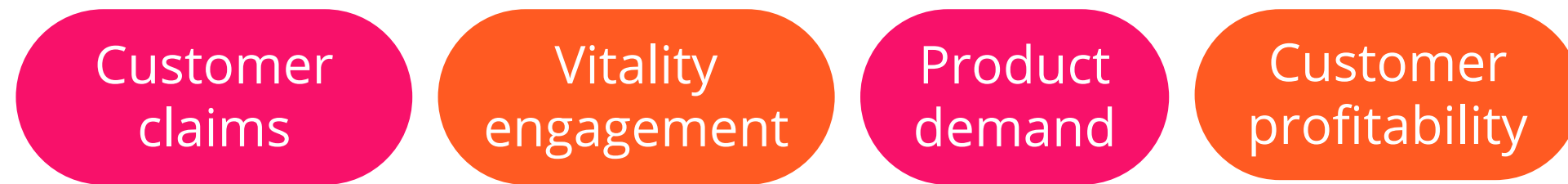


Sophisticated **machine learning** algorithms such as **deep learning neural nets** that combine complex interactions for accurate predictions

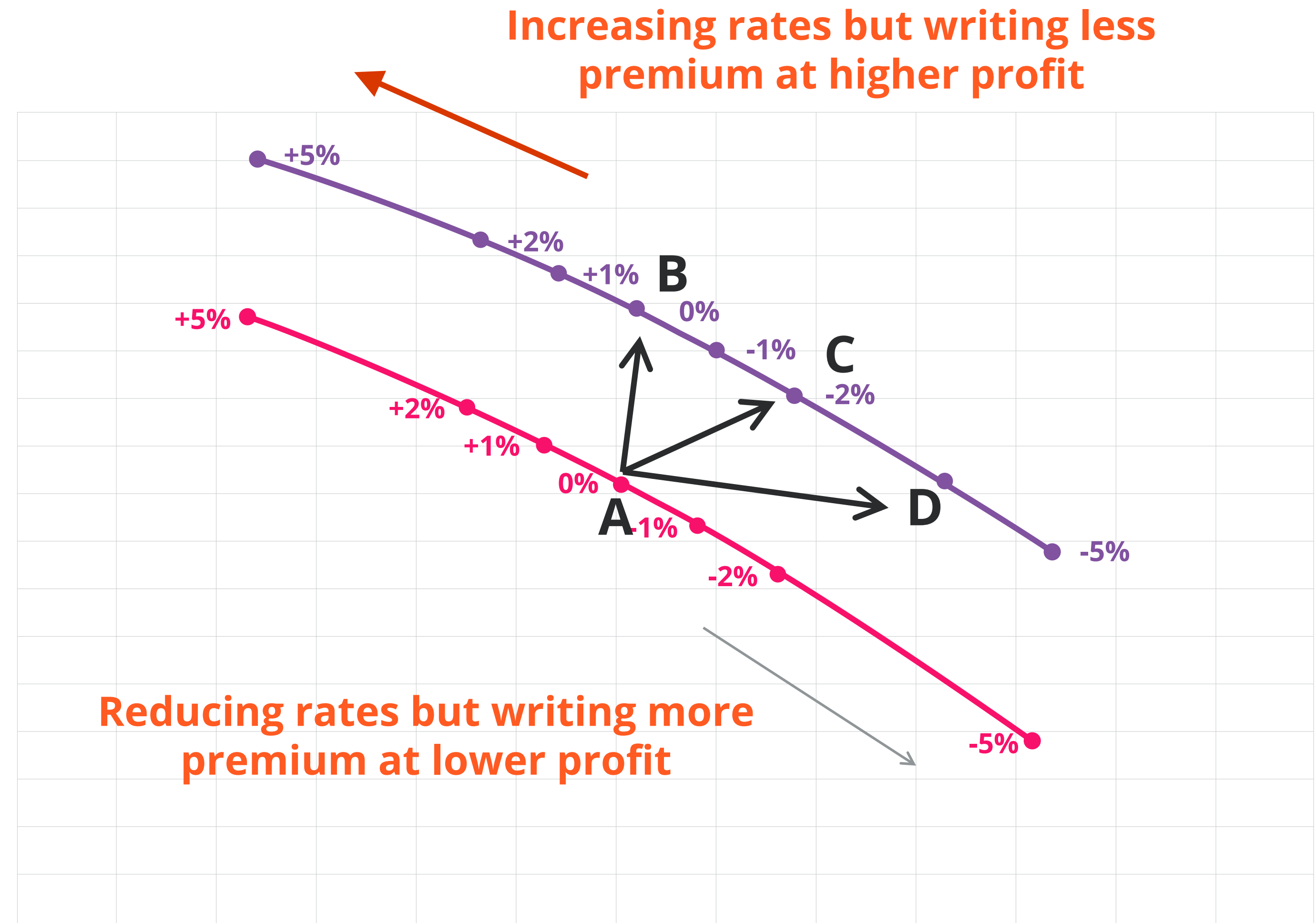


Accurate prediction of customer behaviour allows granular assessment of profitability of new business

Efficient frontiers, based on different rating structures, give us more optimal choices around driving more volume and/or value



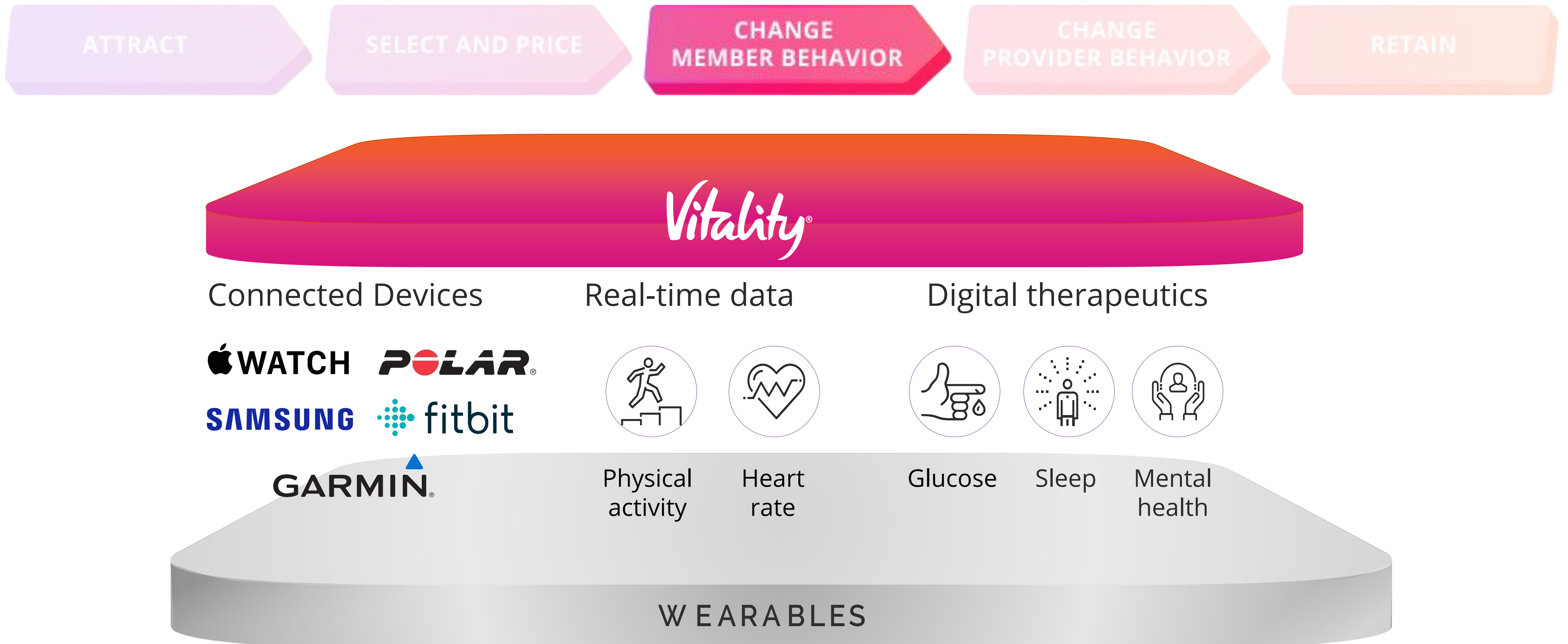
£m year 1-5 contribution profit



£m new business premium



Behaviour change platform can also significantly impact claims ratios through positive change in member behaviour

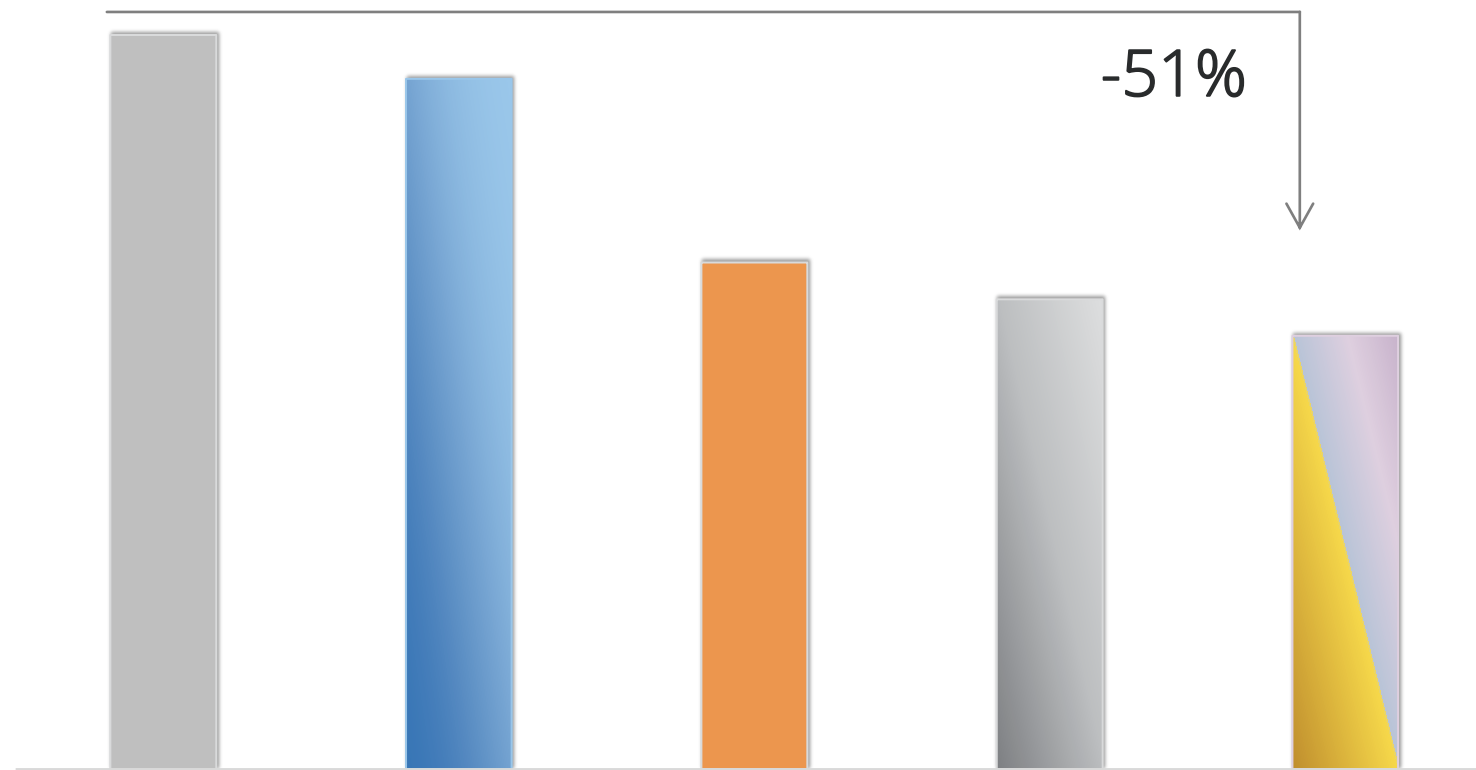




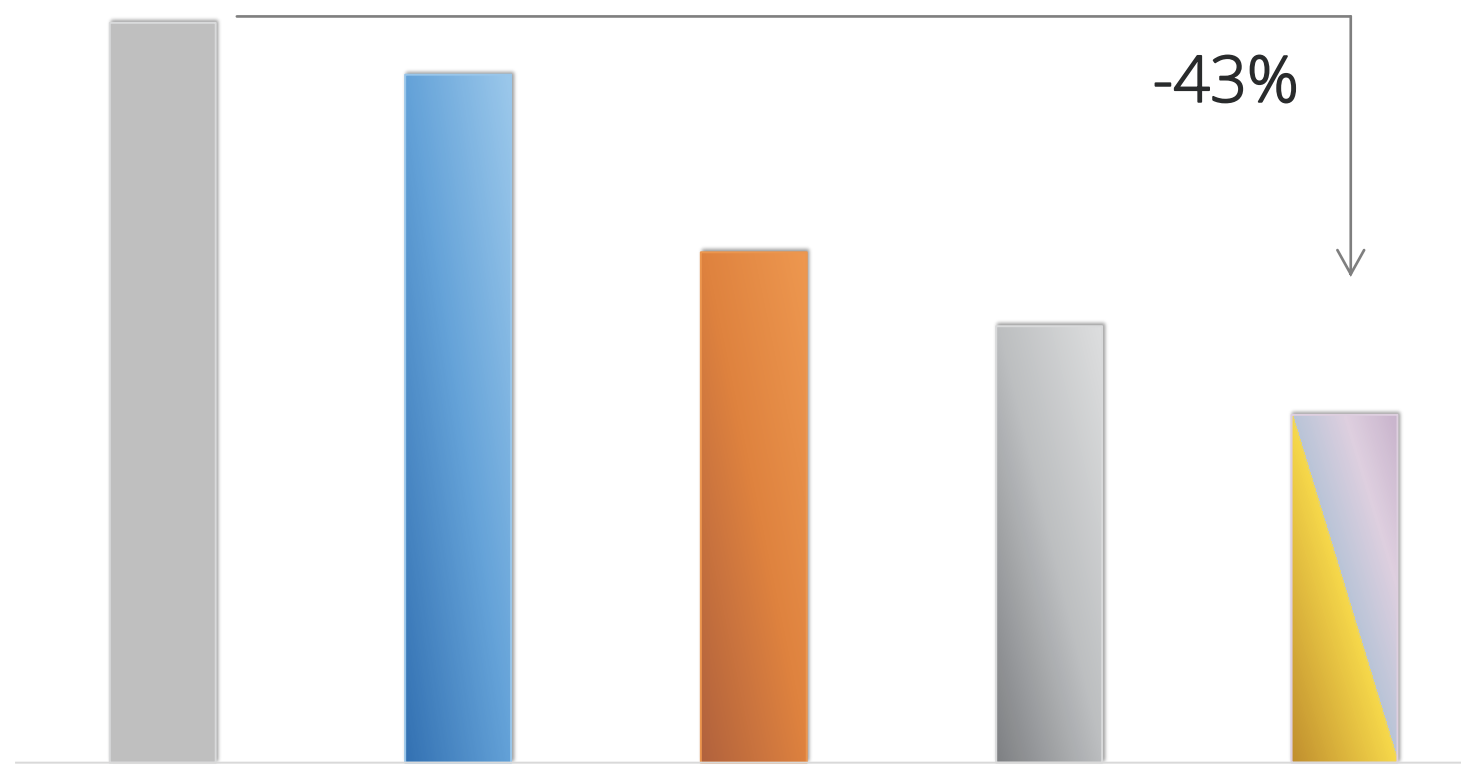
Impact of Vitality in Health Insurance

Risk claims by Vitality engagement for leading chronic diseases

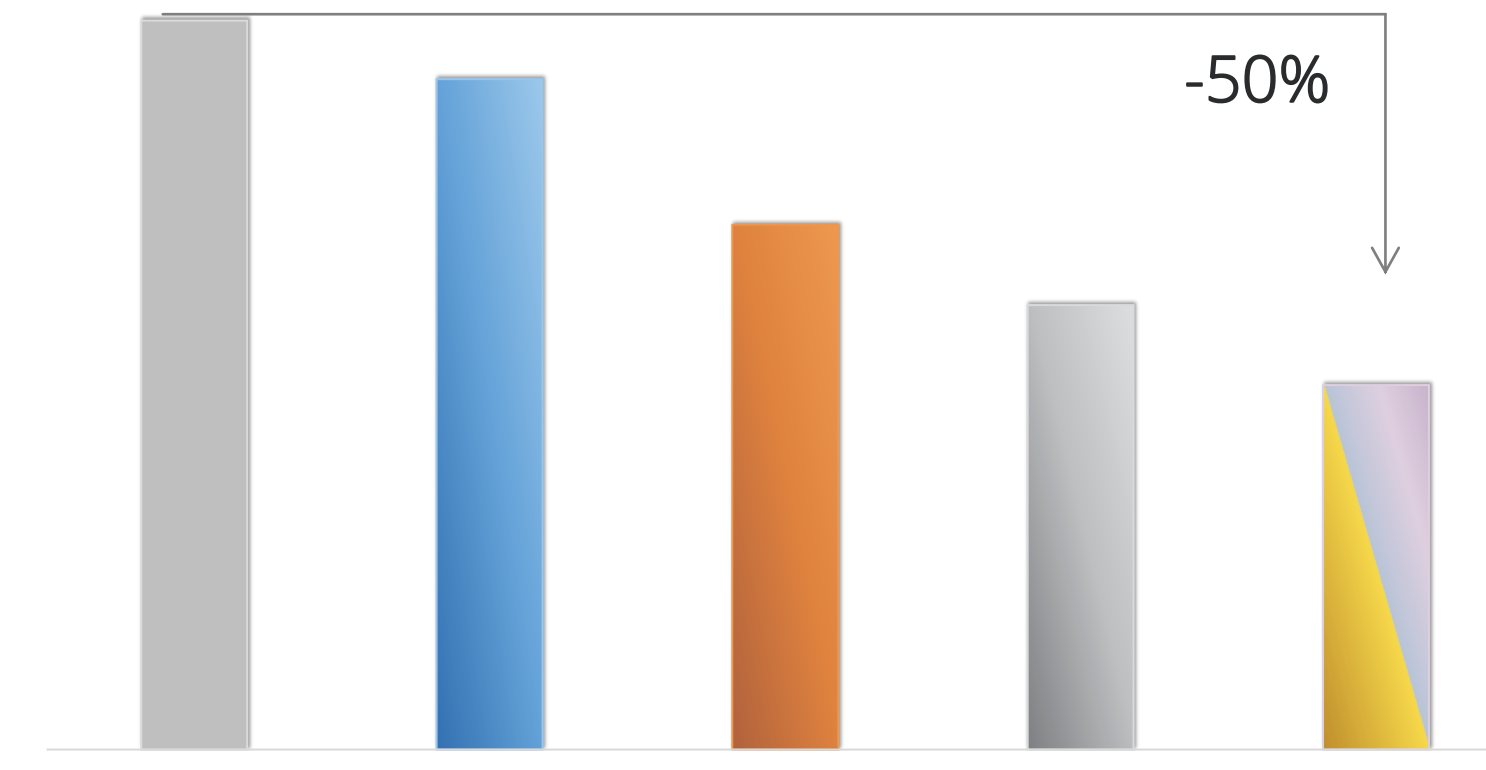
Heart disease



Diabetes

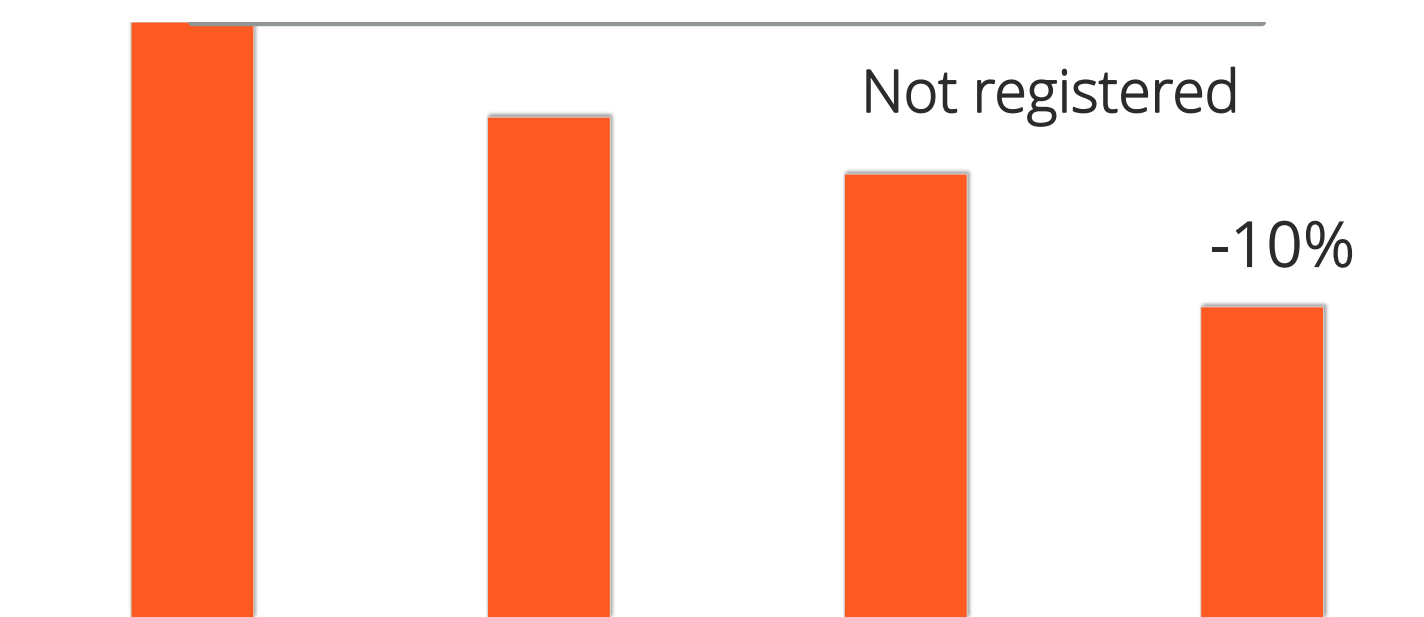


Lung disease

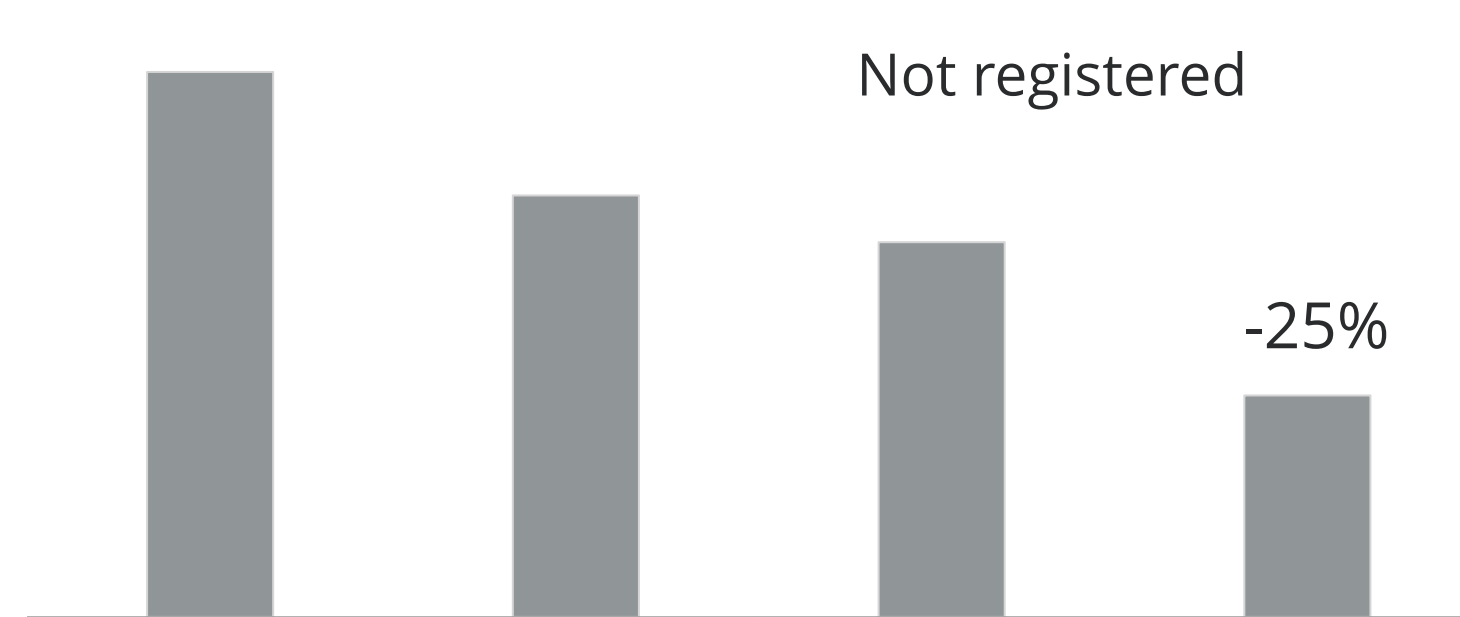


Healthcare utilisation by Vitality engagement

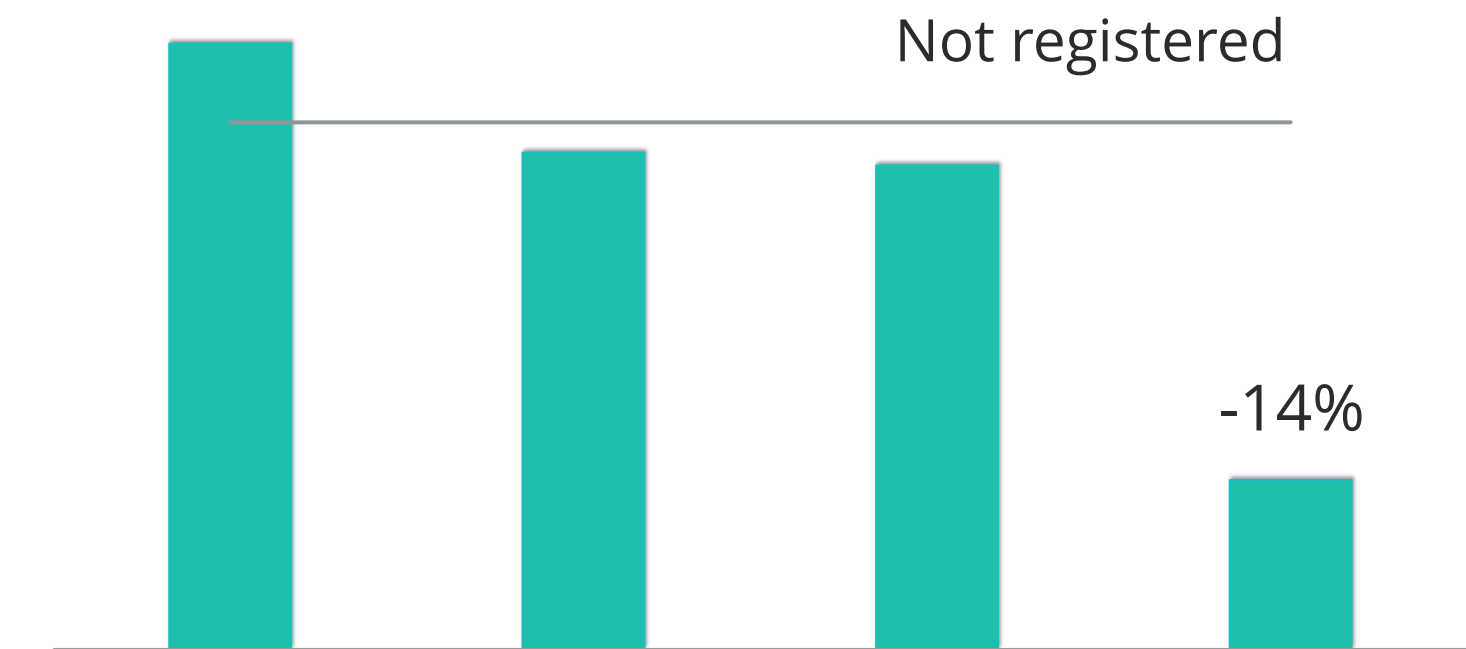
Lower admission rates



Shorter hospitals stays



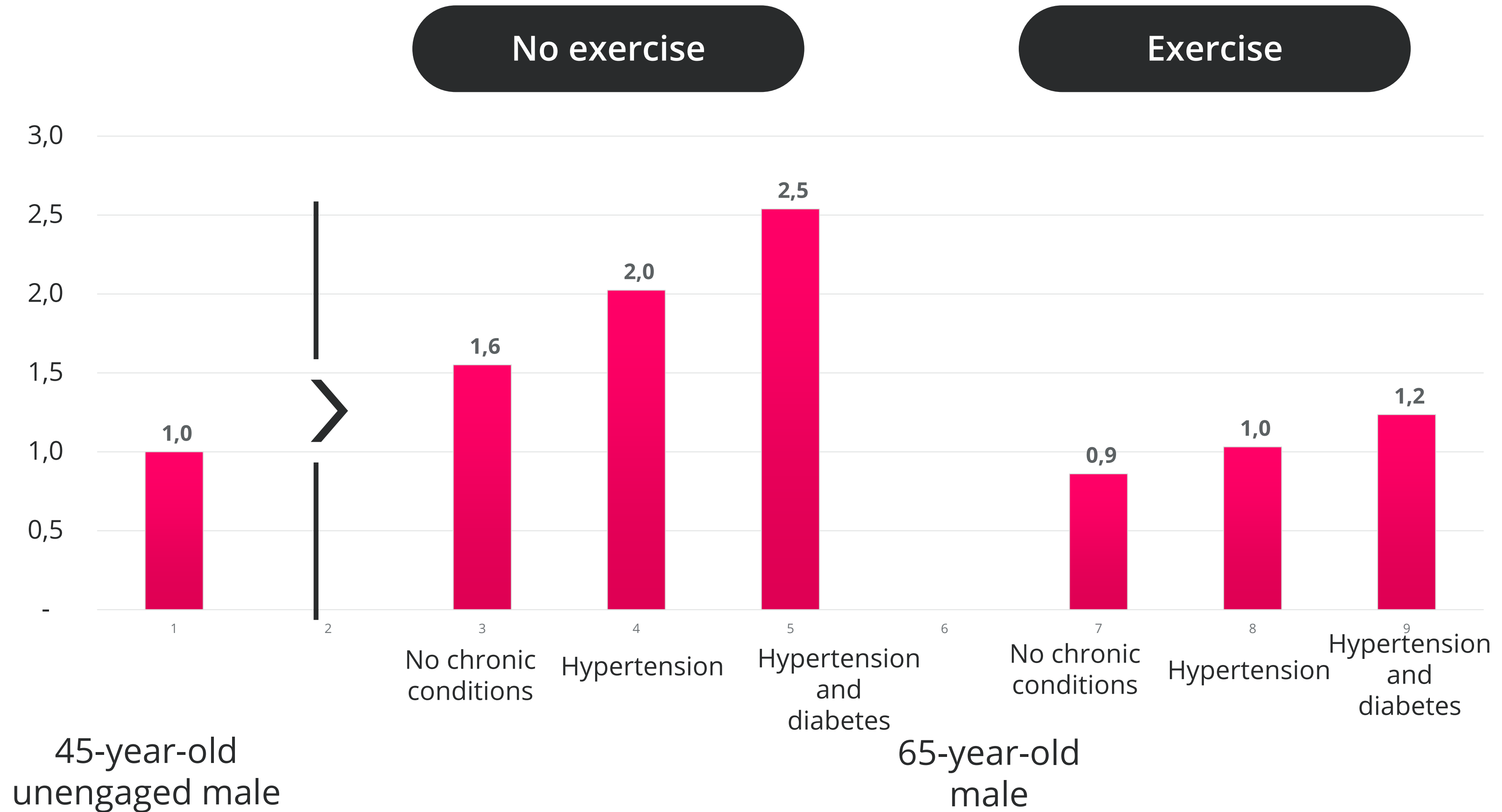
Lower healthcare costs





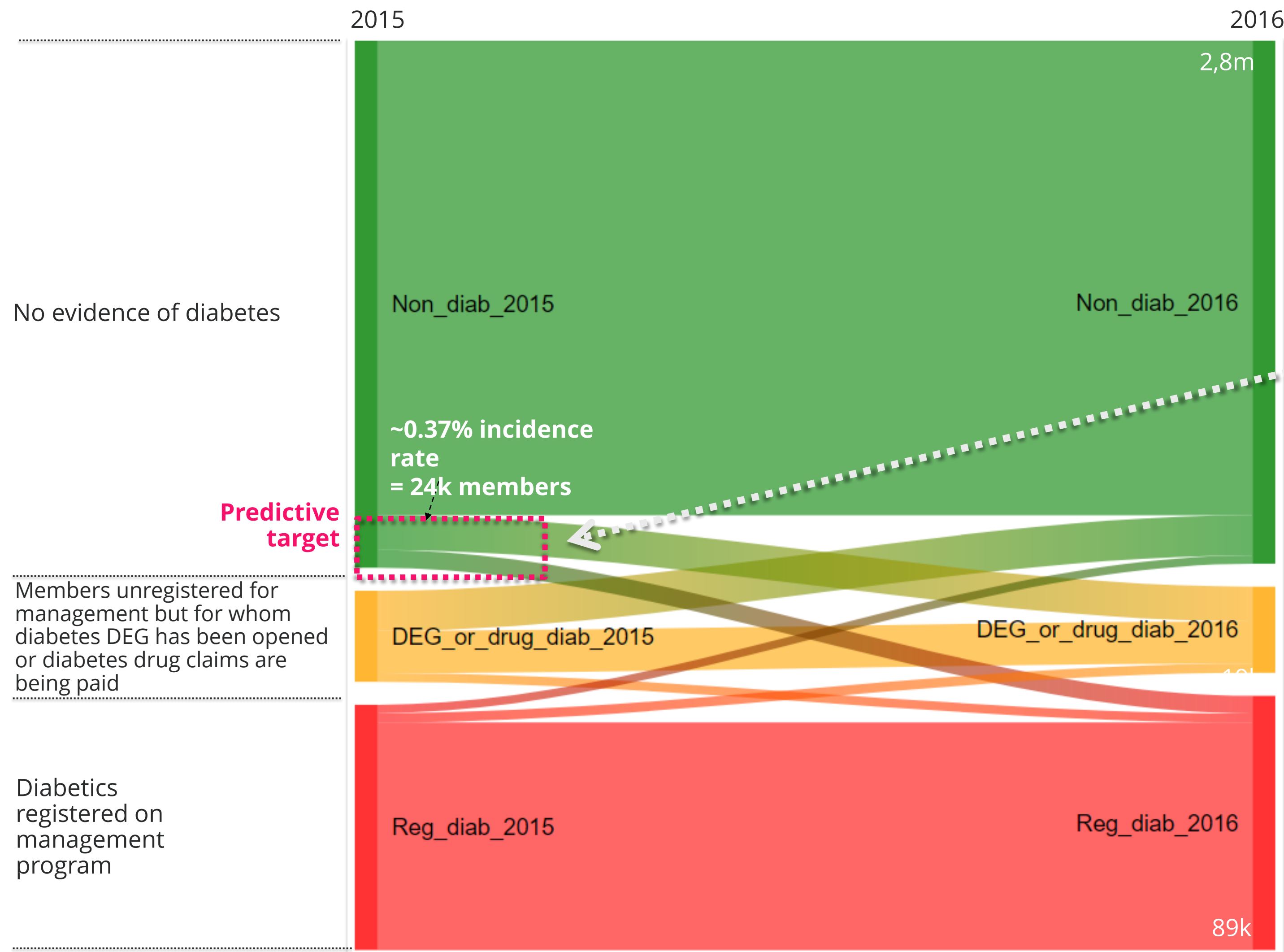
Recent COVID-19 data demonstrates the power of behaviour change

Impact of risk factors on COVID-19 mortality

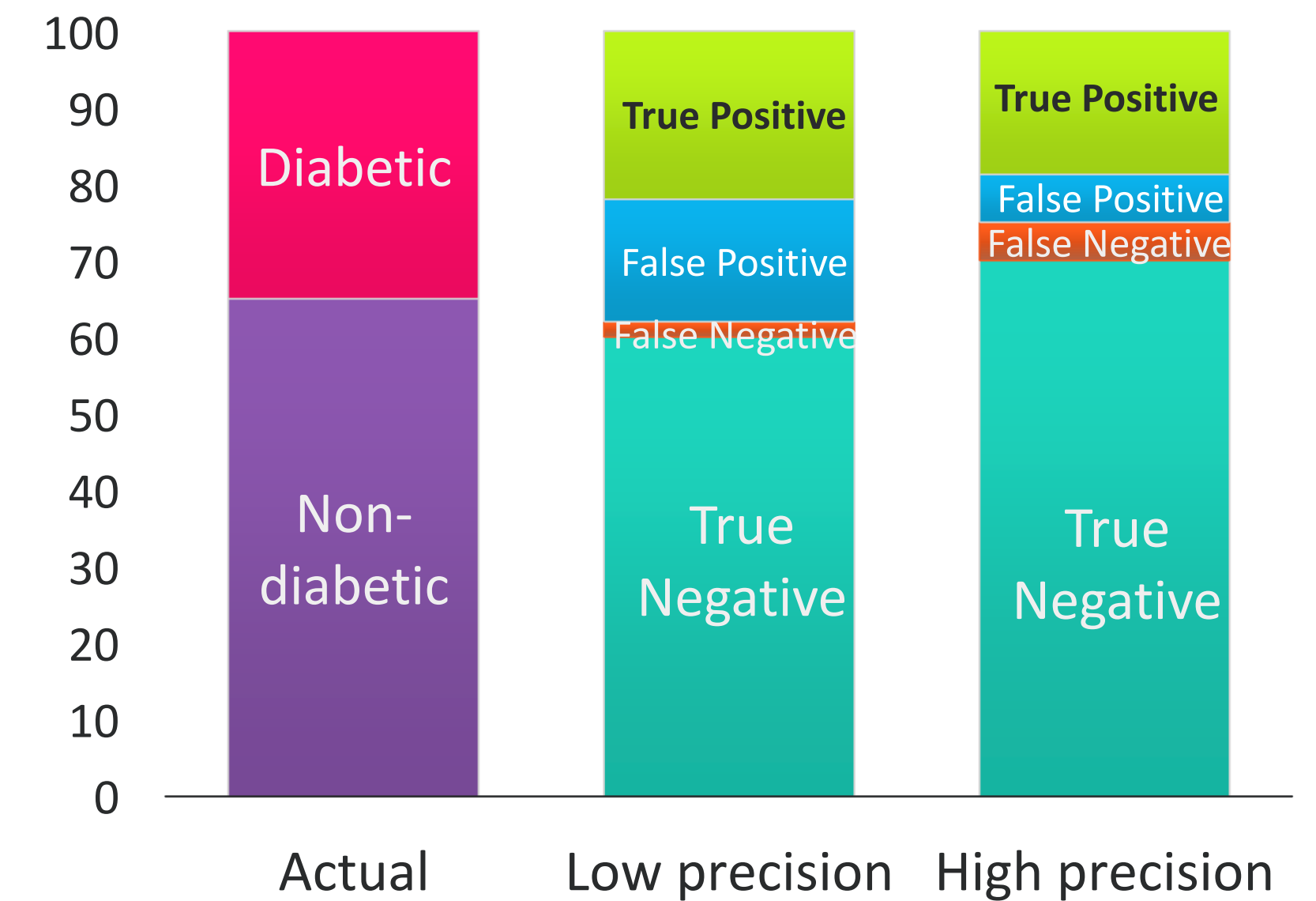




Machine Learning models to predict future risk of chronic conditions - Diabetes cases and progression



Evaluation of model predictive performance



- Model over-predicts (lot of False Positives)
 - Expensive to intervene in so many cases
 - But, picks up more actual cases (high recall)
- Model under-predicts (few False Positives), but those it predicts are more likely to be True
 - Ensures intervention resources not wasted
 - But, leaves more actual cases unidentified (low recall)

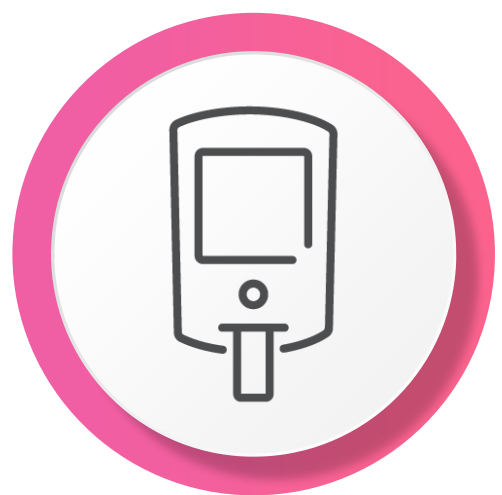


High risk members then enrolled in personalised journeys

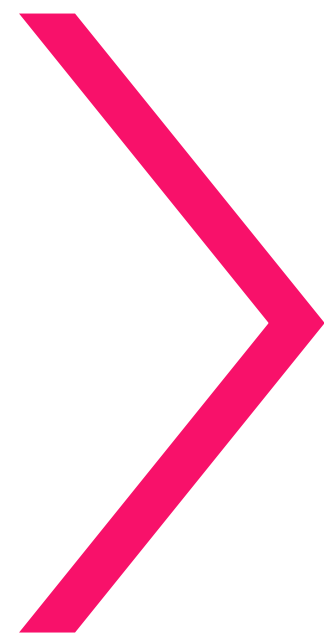
Qualifying members have access to the relevant condition support management programme through a simple, verified 3 step enrolment process through their Vitality programme



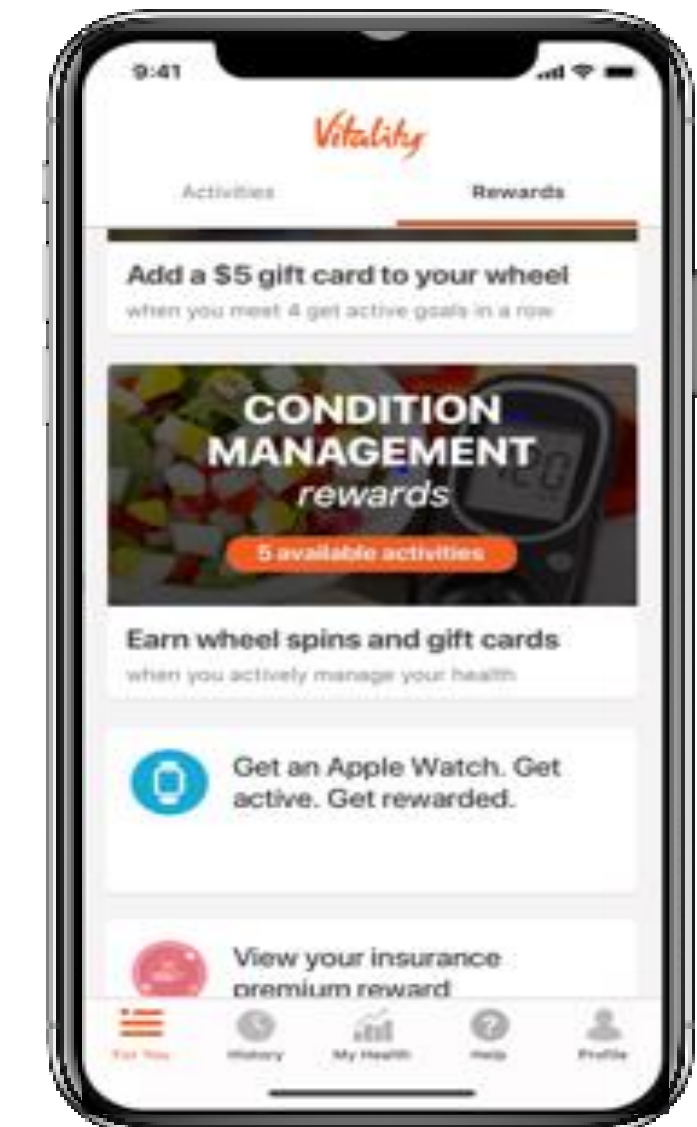
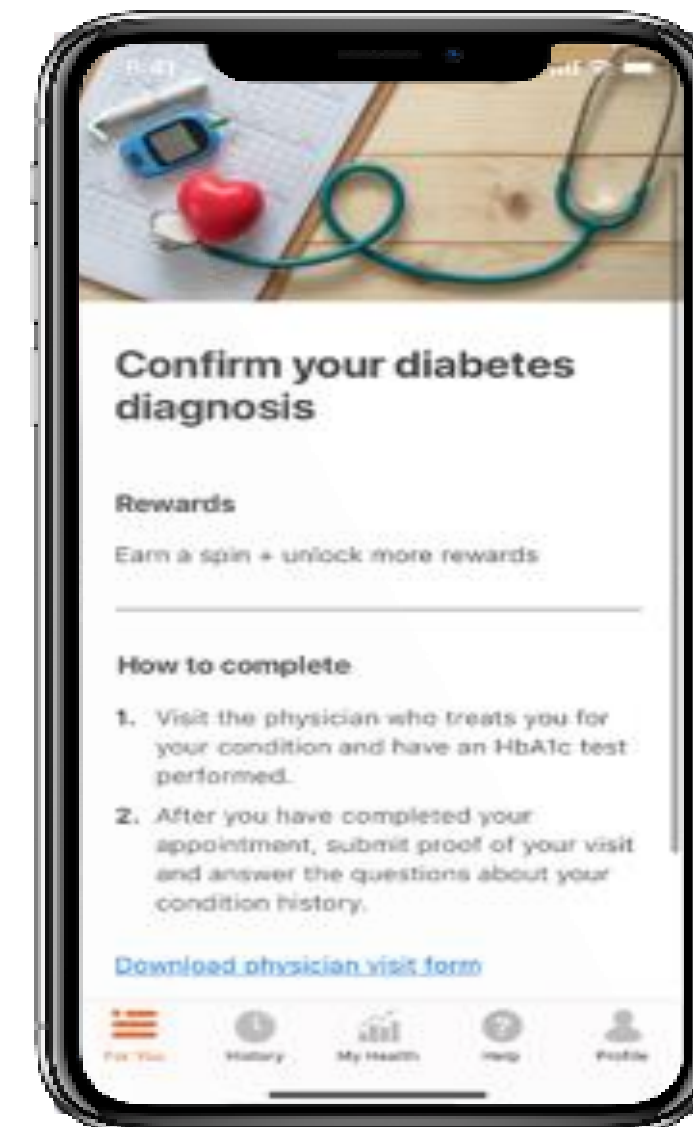
Unlock relevant condition management journeys



Diabetes

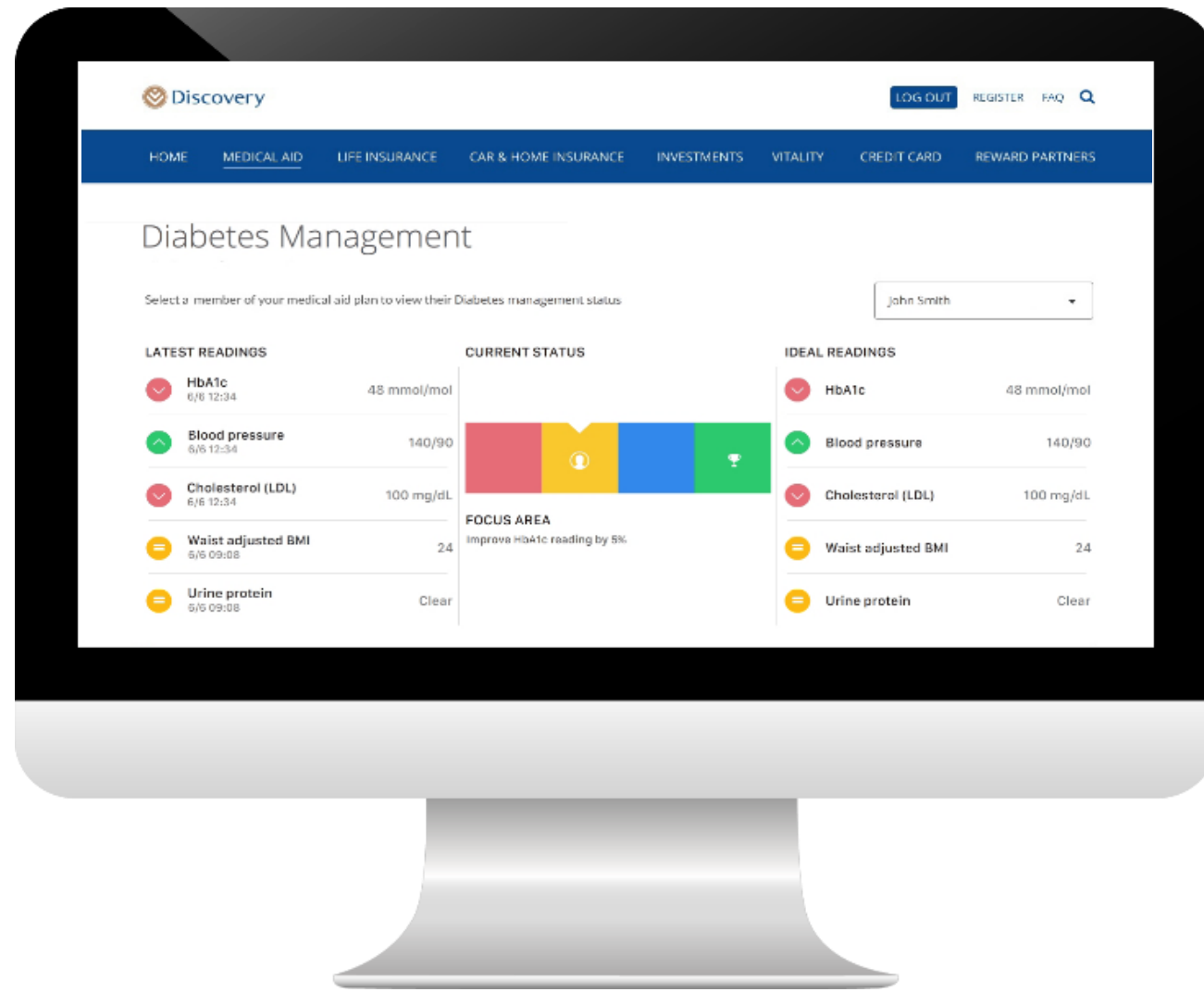


- 1 Visit your Doctor
- 2 Complete a HbA1c test
- 3 Upload doctor completed enrolment form





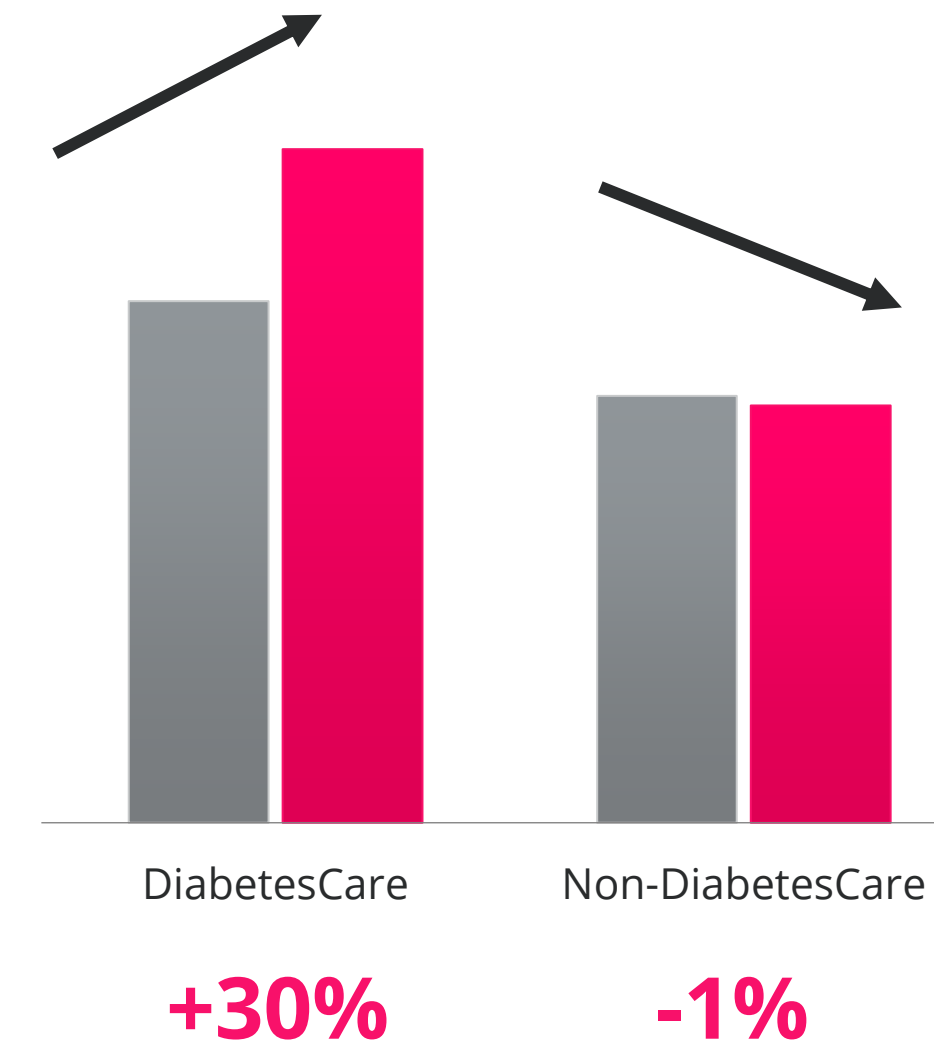
Results | **DiabetesCare programme** integrated with Vitality has improved engagement



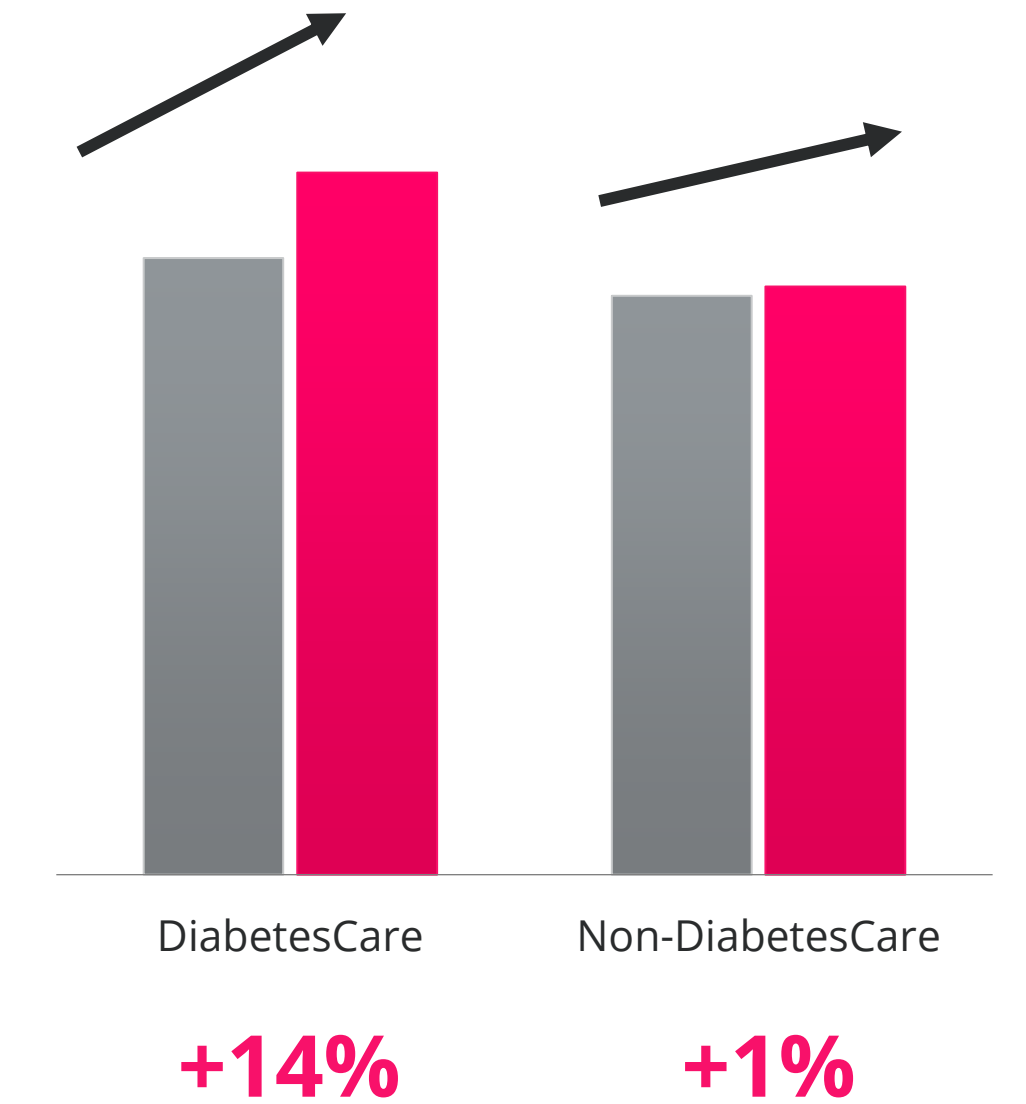
Enrollment unlocks additional risk benefits

Access to high quality coordinated care

% diabetics who have had an HbA1c test



% diabetics with medication compliance



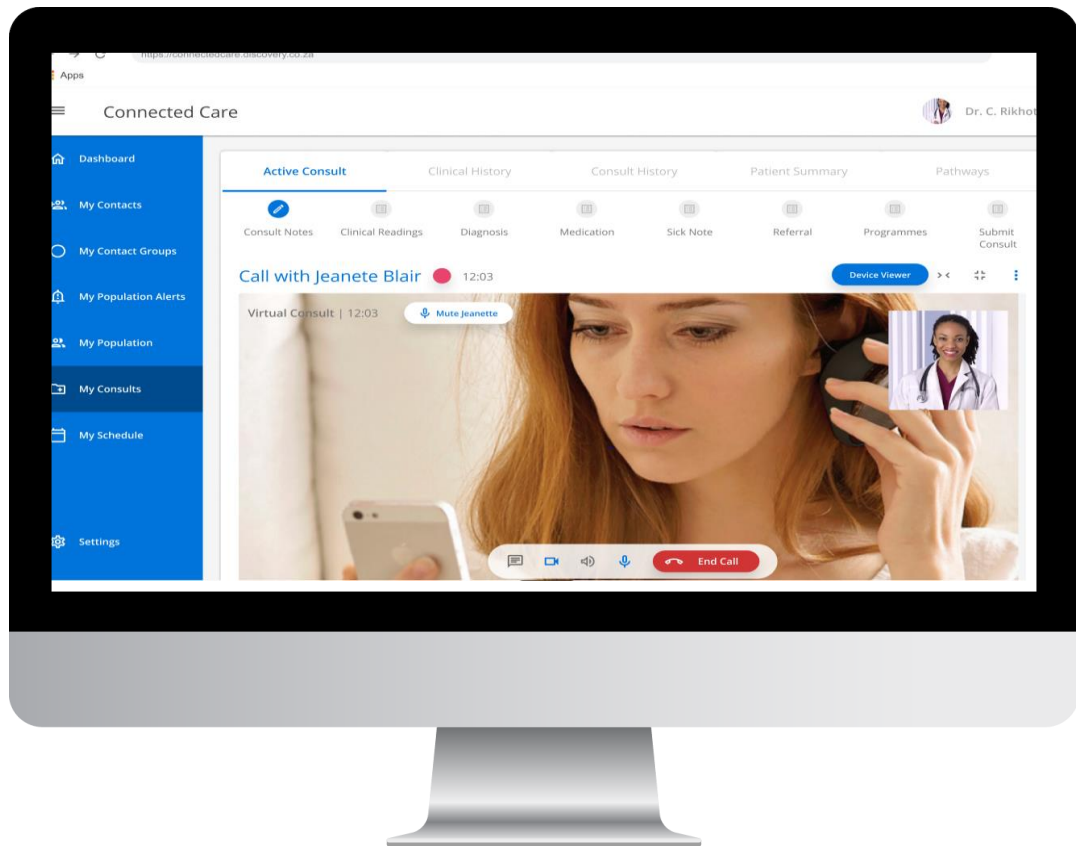


Members have access to connected care at home, enabling on-demand healthcare delivery at home

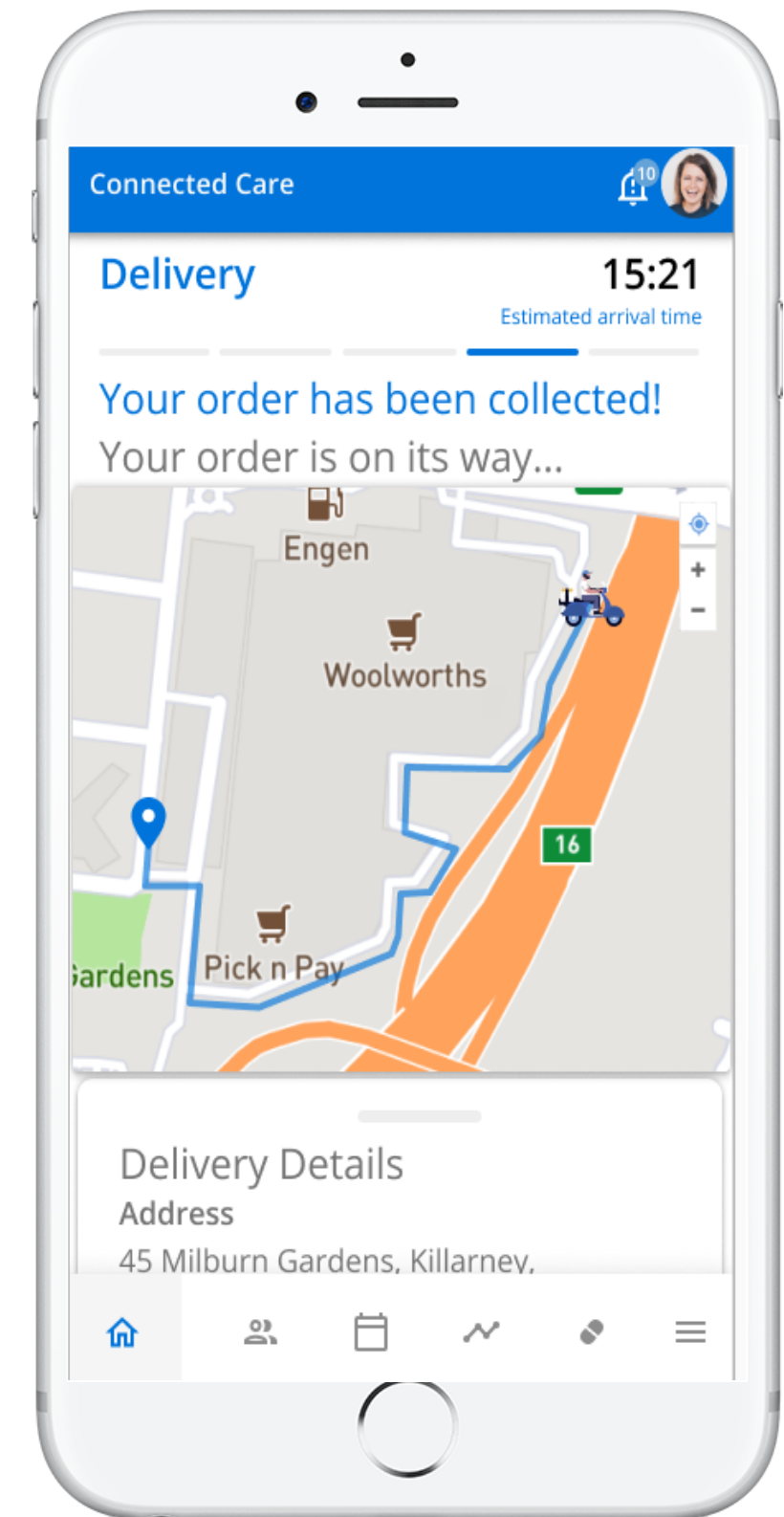
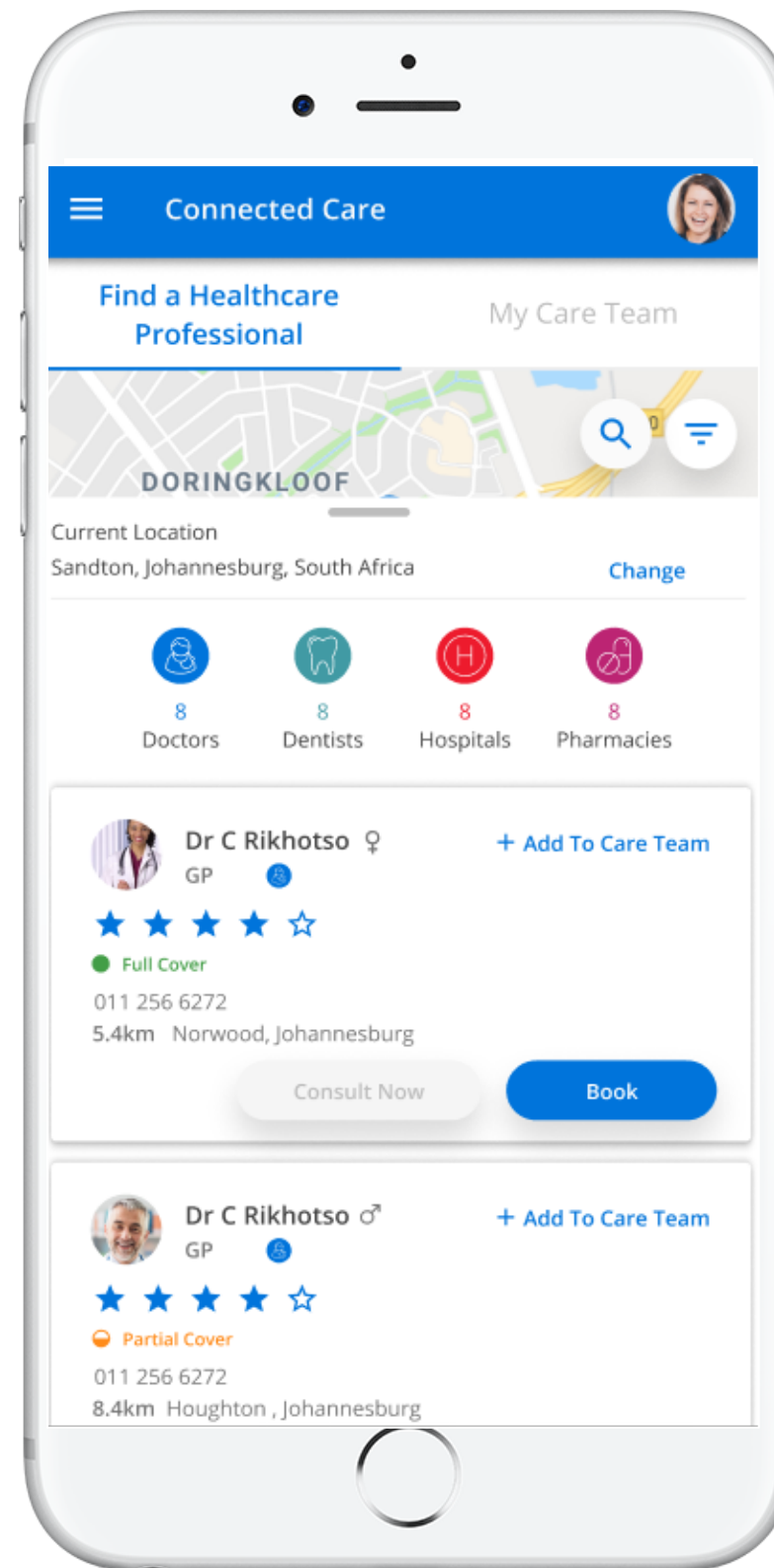
Detailed medical examinations and advanced virtual consultations

24/7 doctor support
Discovery TytoCare Dr Network

End-to-end digital experience
Including e-scripting, same-day medicine delivery and automatic EHR updates

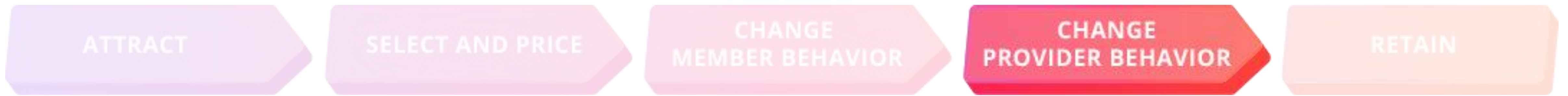


Powered by TytoCare



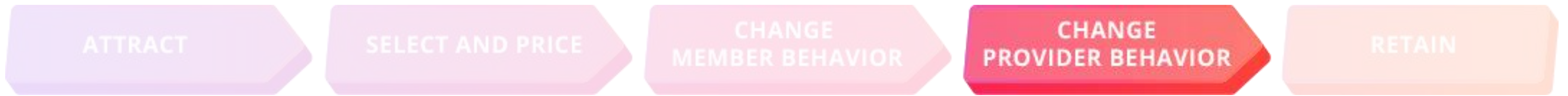


Technologies to impact provider behaviour | Value Based Care





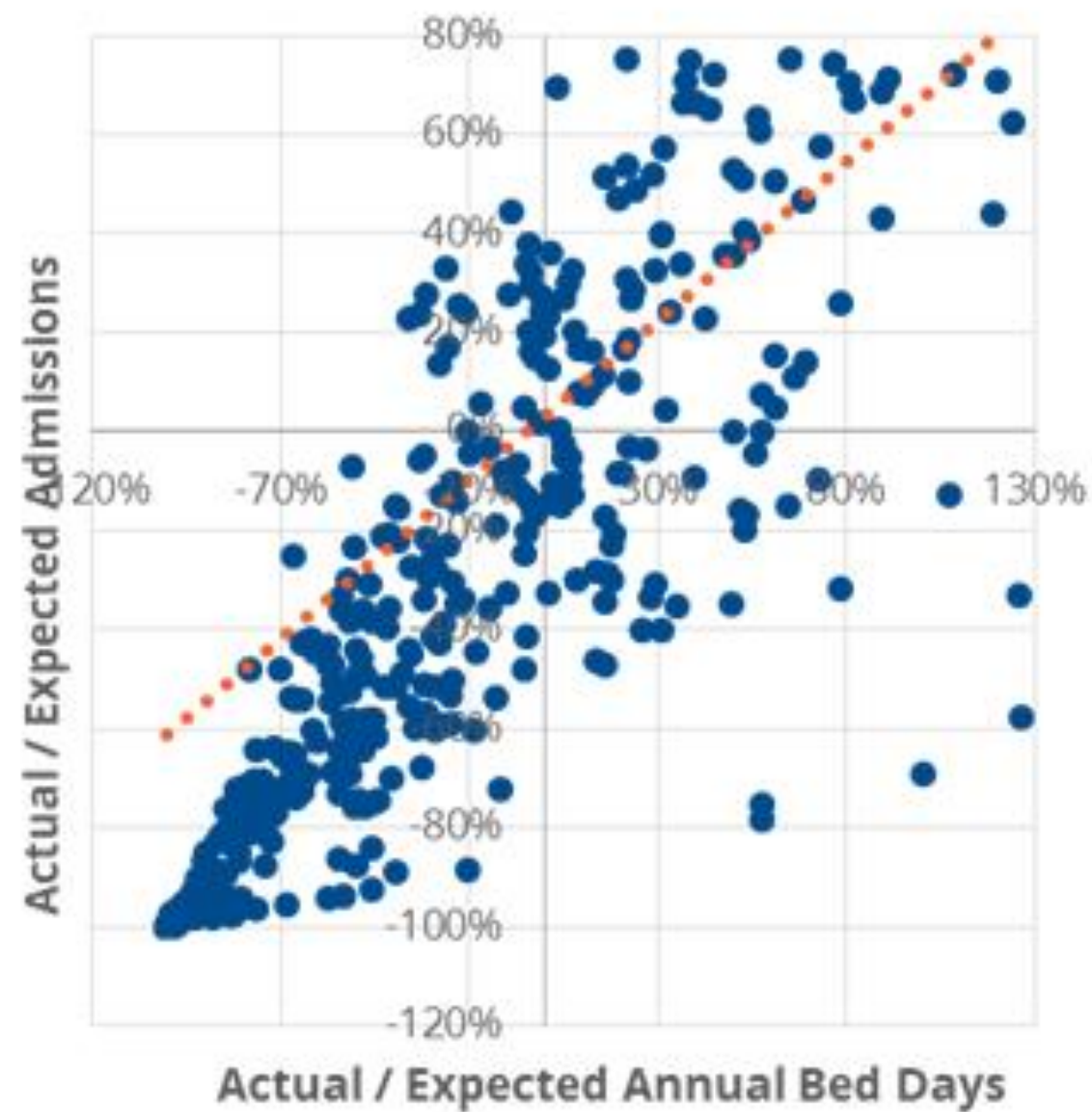
Technologies to impact provider behaviour | Value Based Care



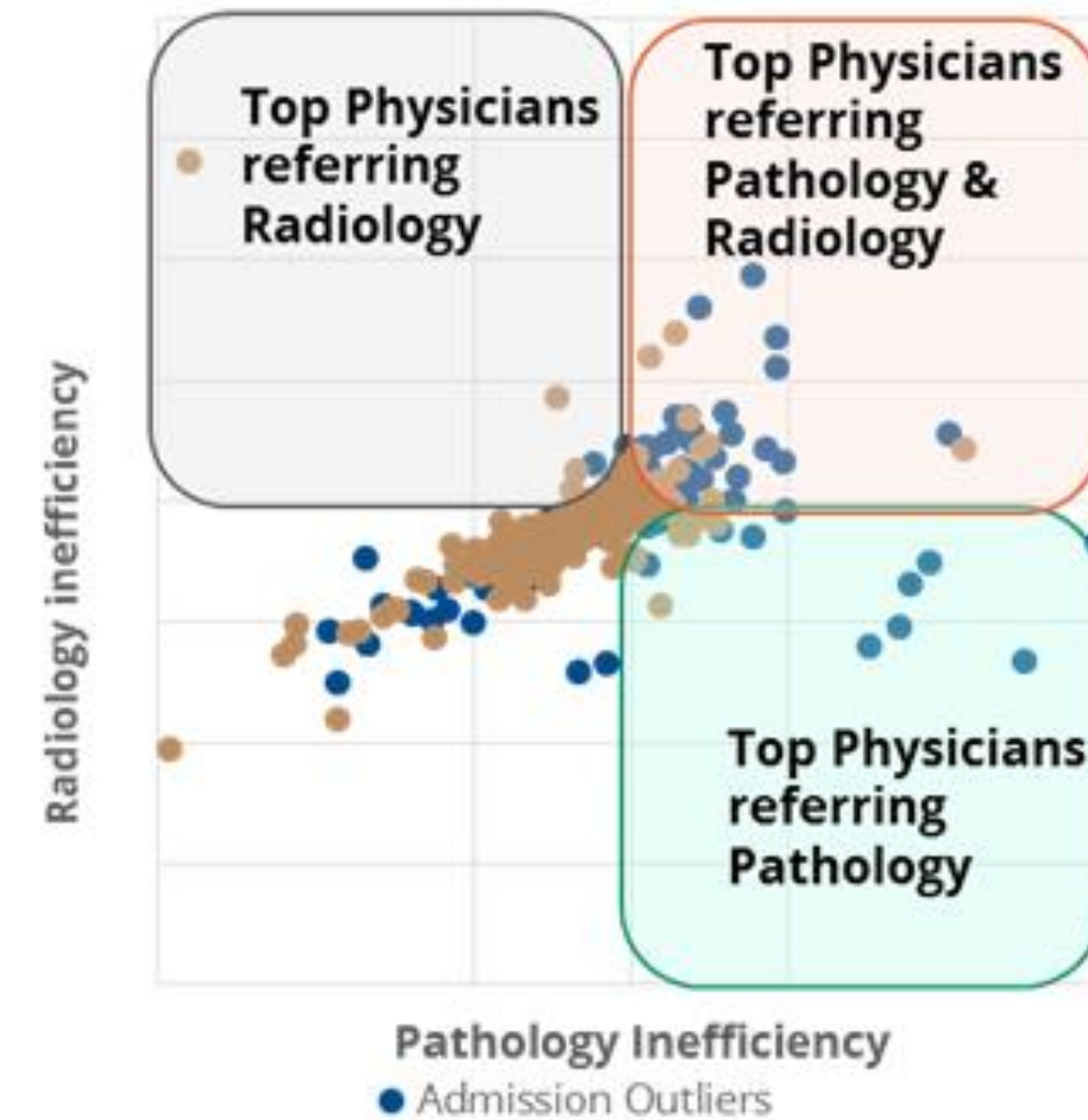
Using rich datasets, health professional outliers can be identified and governed appropriately

Hospitals

Profiling doctor driven hospital utilisation



Profiling physician usage of investigations

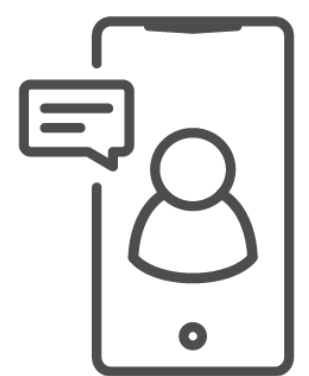




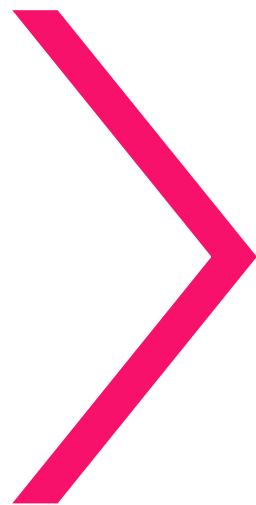
DIGITAL HEALTH PLATFORM | Provides fully integrated solution for providers to guide care and keep them engaged



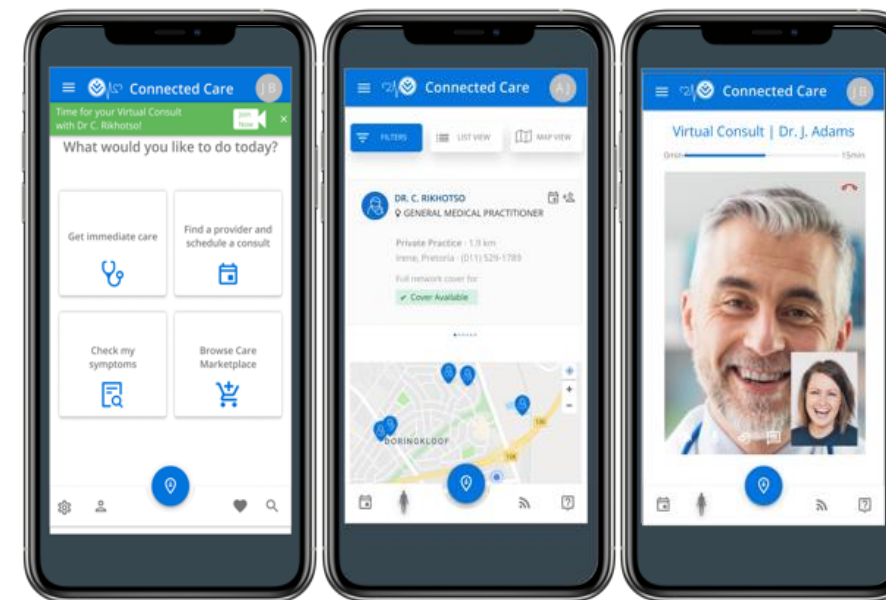
Care team app and web portal



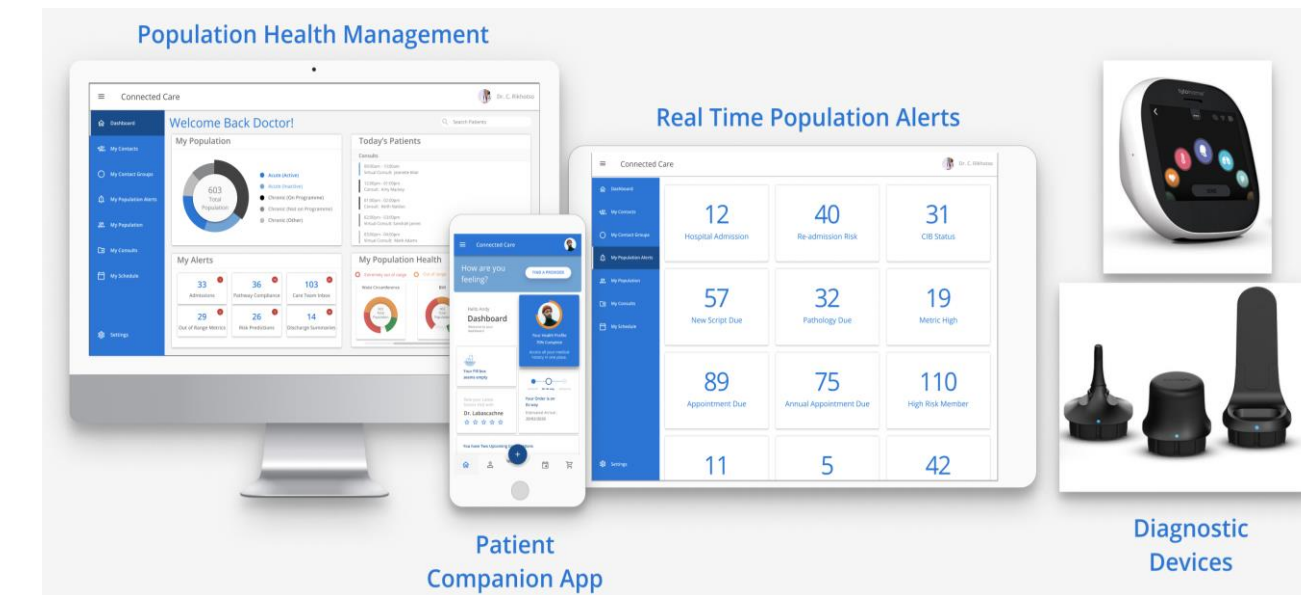
Member companion app and web portal



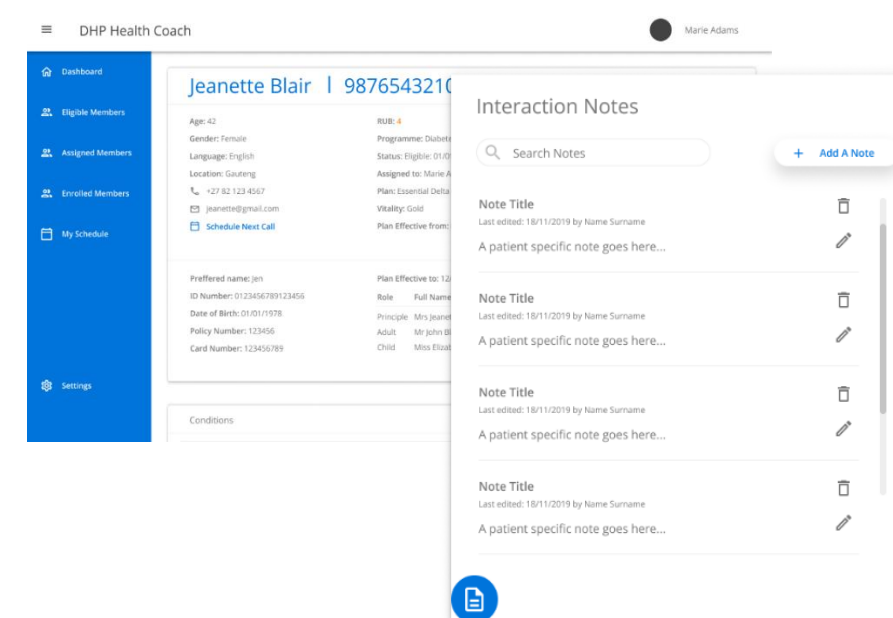
Virtual Care



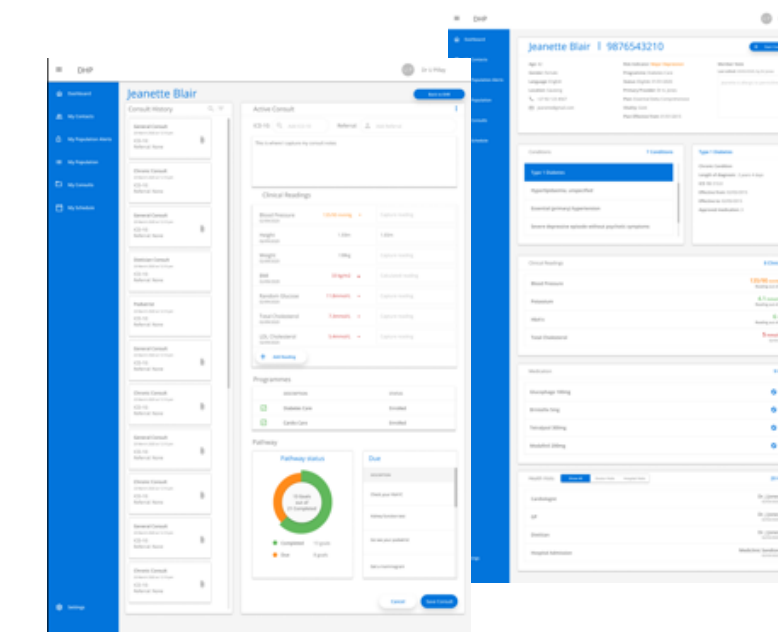
Integrated Patient Management



Coaching



EHR & EMR



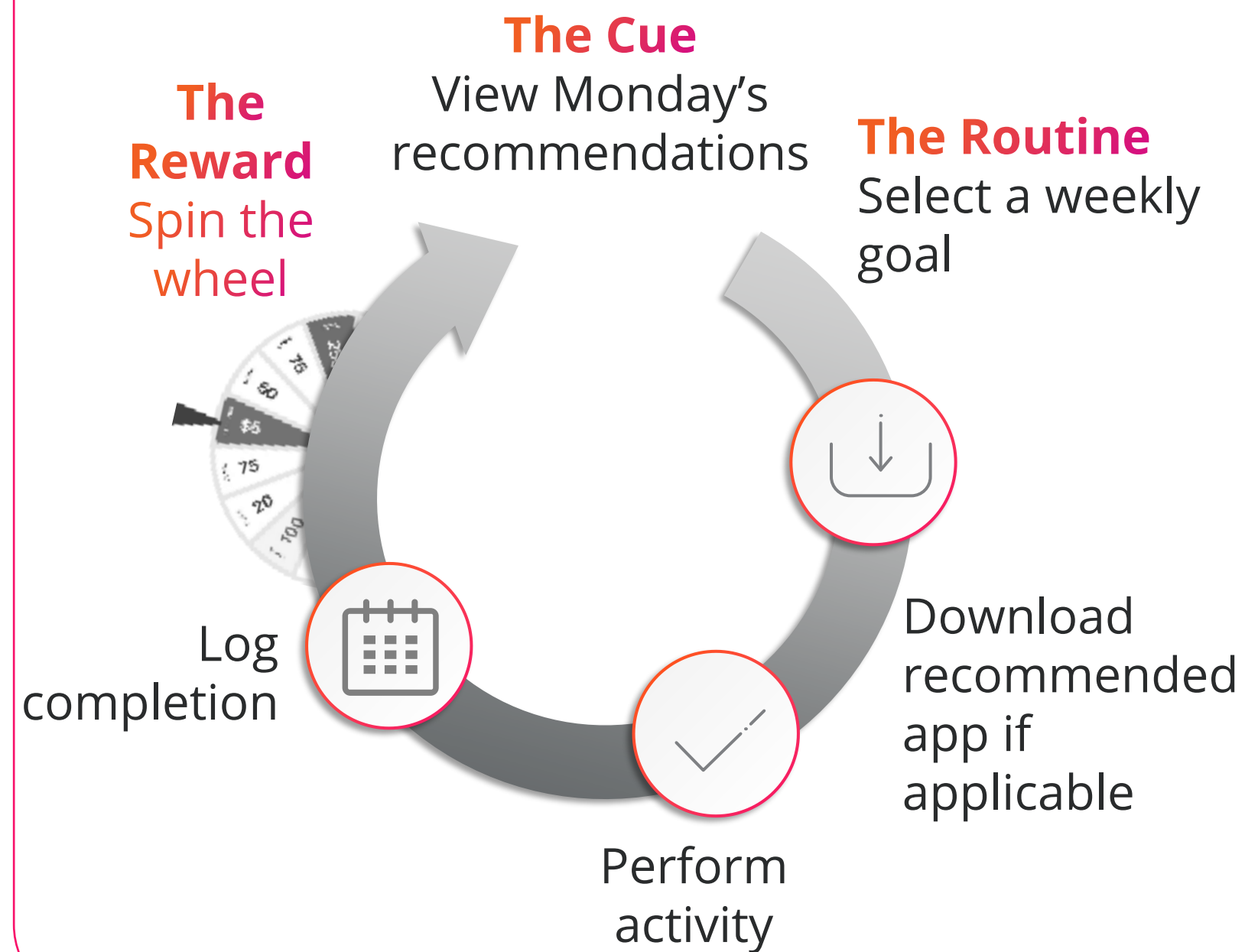


A Vitality Active Rewards program for Doctors has been initiated in South Africa to drive engagement and performance improvement

Vitality Active Rewards for Doctors



Healthier Doctors have Healthier Patients



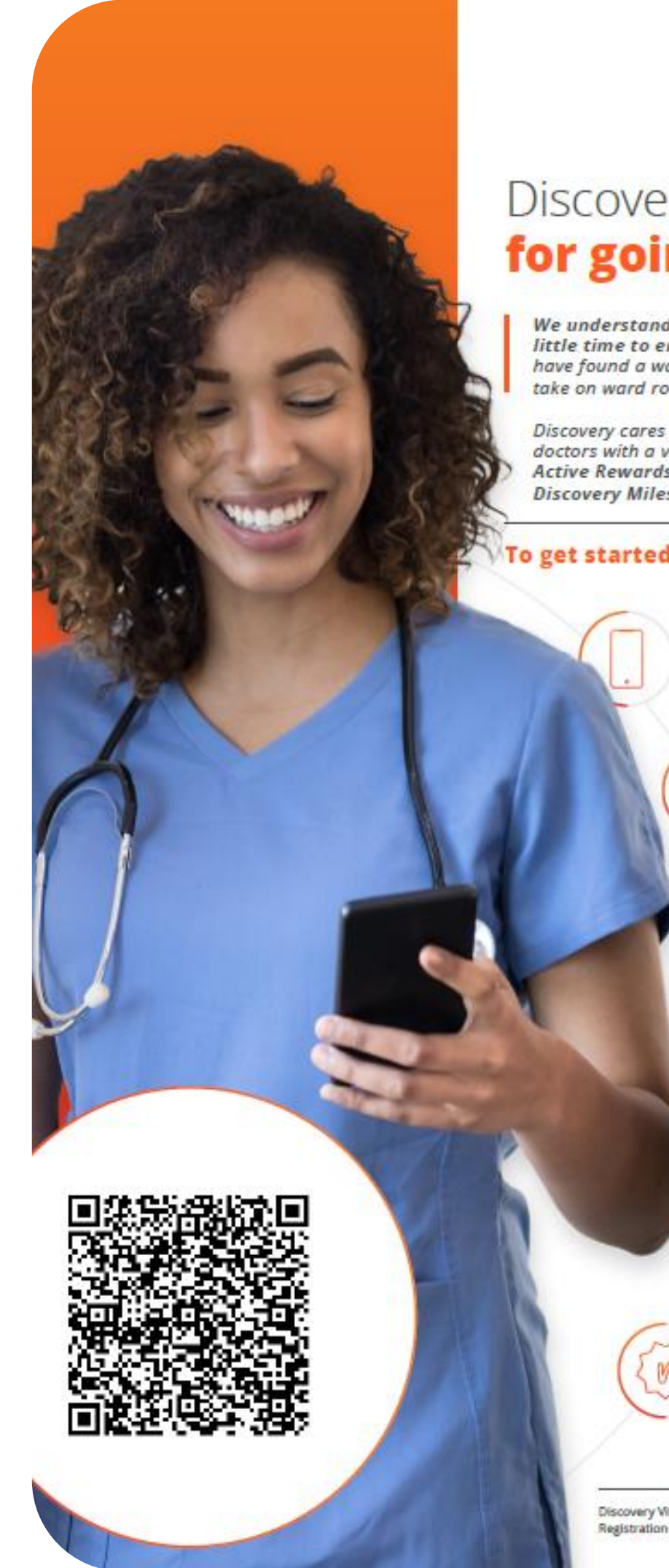
Positive impact on Doctors

Doctor engagement
increased from
15.5% - 19%

23% Increase in frequency of
exercise

Proportion high intensity
exercise increase from
7% - 13%

Exercise days per month
increase by **23%**



Discovery rewards doctors
for going the extra mile.

We understand that your busy lifestyle may leave you with little time to engage in structured wellness activities, so we have found a way for you to get rewarded for the Extra Miles you take on ward rounds and calls as well as your leisurely activities.

Discovery cares about the health of doctors and invites all doctors with a valid HPCSA (MP/IN number) to join Vitality Active Rewards for Doctors (VARD) free of charge and earn Discovery Miles for going the Extra Mile.

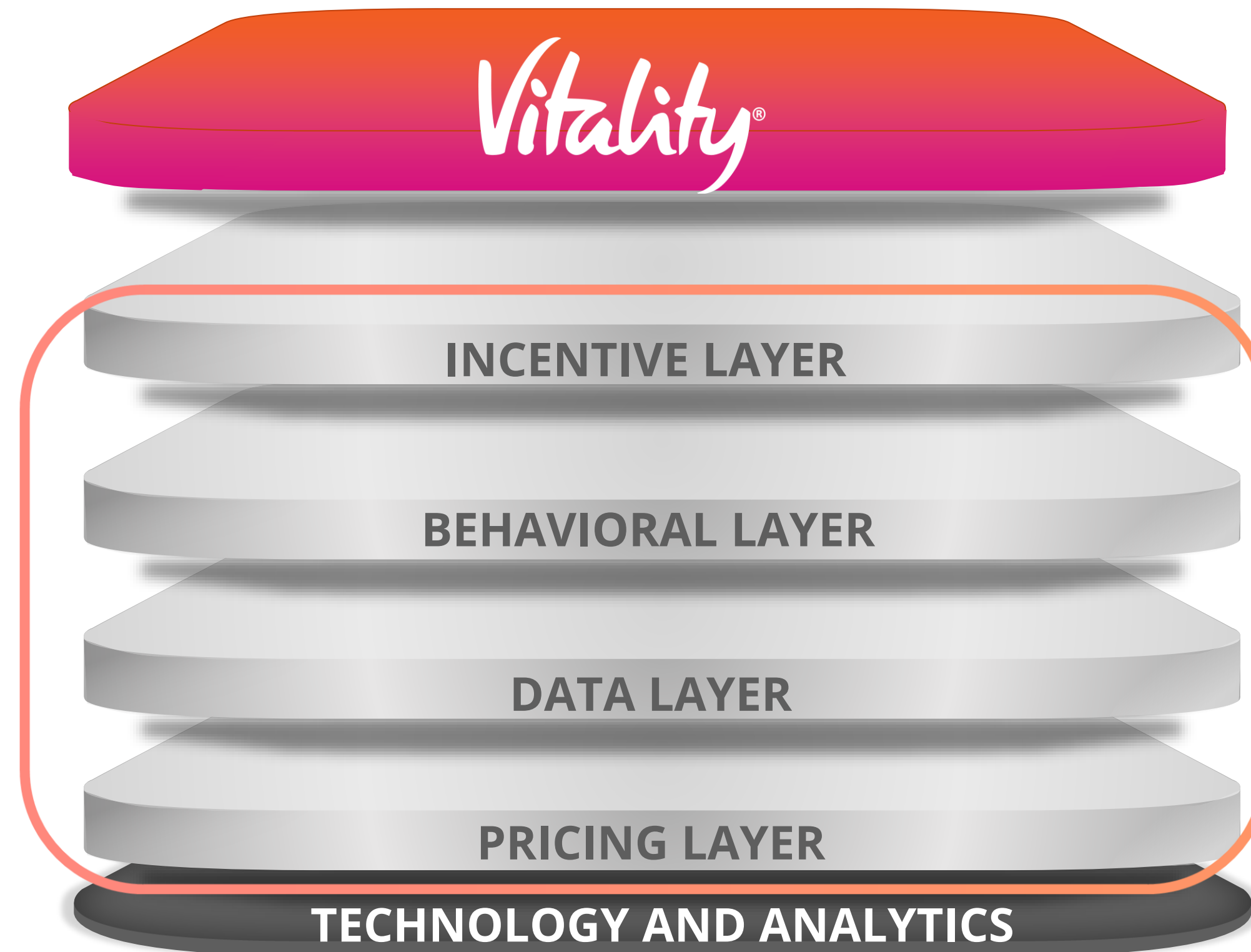
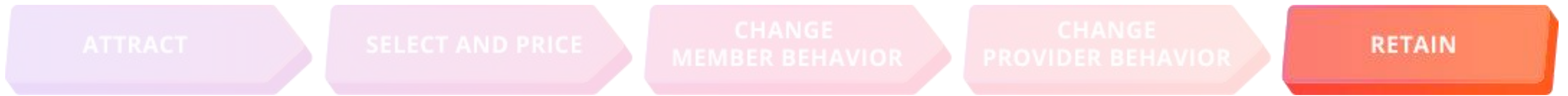
To get started:

- Step 1** Scan QR code, follow link and fill in your details.
- Step 2** Await the confirmatory email from Discovery VARD team.
- Step 3** Download the Discovery App.
- Step 4** Get active - reach goals and earn miles.
- Step 5** Get rewarded - play the gameboard and spend or accumulate miles.
- Step 6** Compete for a spot on the leaderboard and enjoy boosted rewards.

Discovery Vitality (Pty) Ltd is an authorized financial service provider. Registration number: 1999/0077/07. Limits, terms and conditions apply.



Amplify Health's Value Chain integrates technology to create high performance health insurance businesses and transform healthcare delivery



AI tools can be used for value-based renewal pricing to conserve good risk



1. Statistical projection of claims using blend of portfolio claims and own experience
2. Add allowance for expenses, commission and profit
3. Fit into required shape of renewal increases

Value ("PRAG")

Category	Definition
Purple	High value policies
Green	Medium value policies
Amber	Low value polices
Red	Negative value policies

Every SME policy undergoes a projection of claims at renewal using a sophisticated statistical algorithm. For SME, this is the same as that used directly in pricing.

The policy value is calculated over the next two years (i.e. premium – claims – commission – vitality costs). Based on this value, a PRAG category is assigned.

The value is used to determine discount availability and retention prioritisation.



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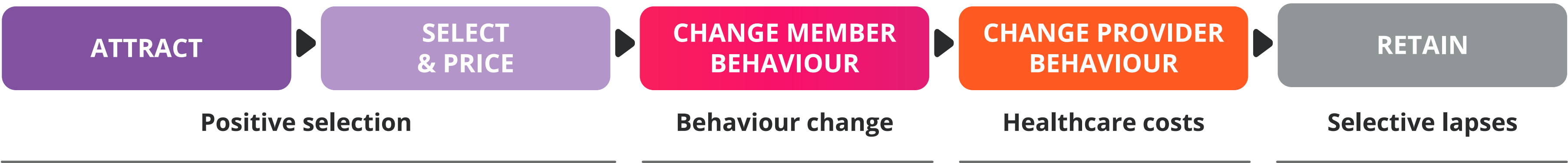
3. Results

Technology has the potential to drive superior health insurance performance and improve healthcare delivery

Impact | Superior health insurance performance - UK

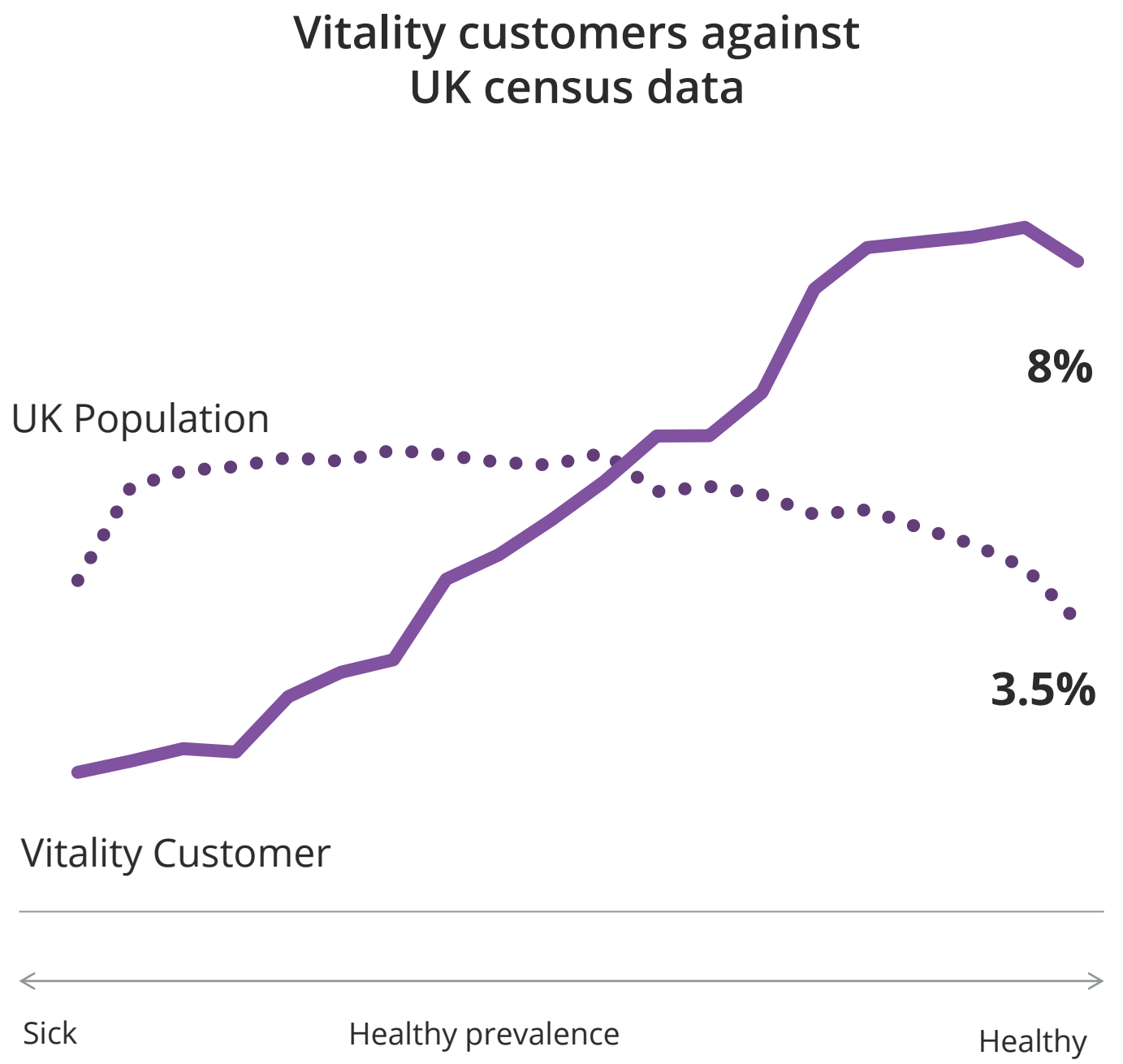


NEW BUSINESS | IMPROVED OPERATIONAL EFFICIENCY

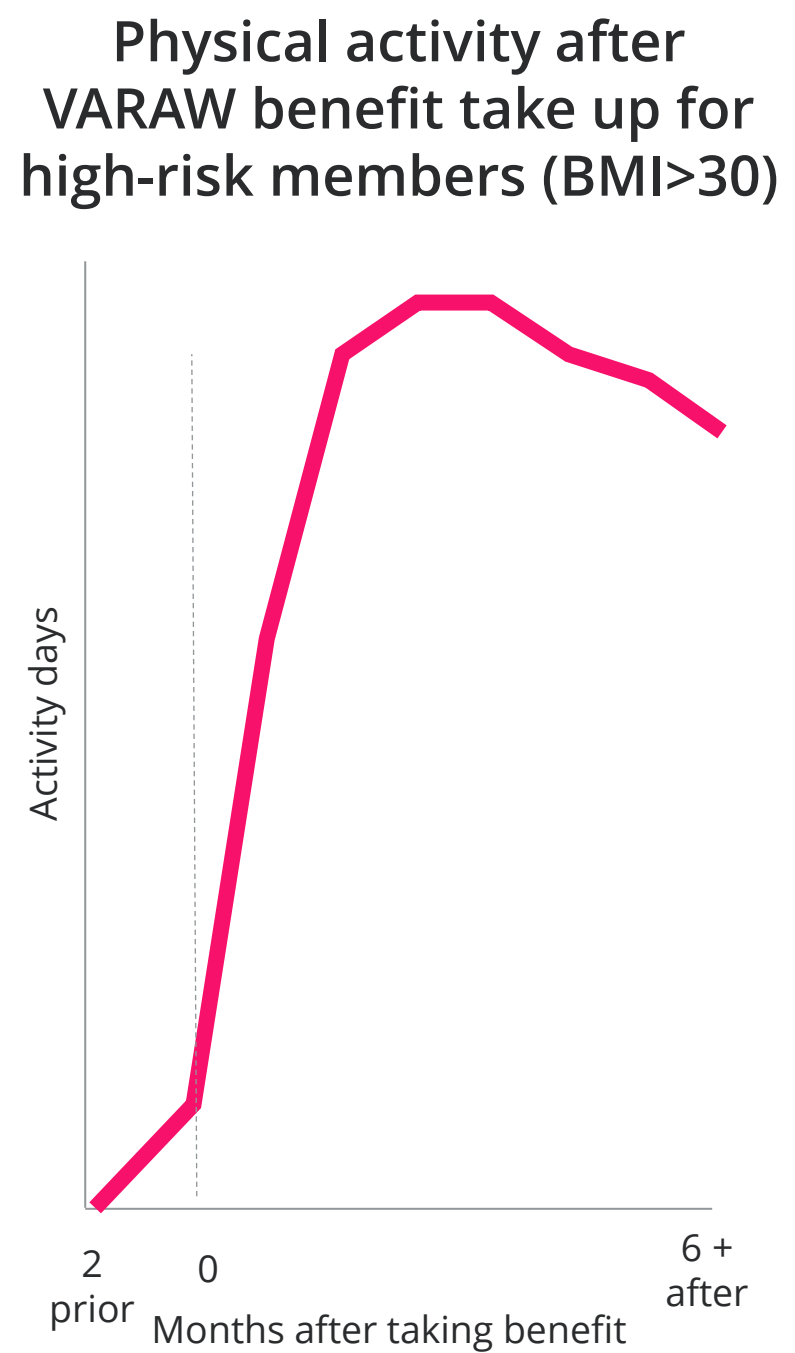


3rd Largest health insurer in UK

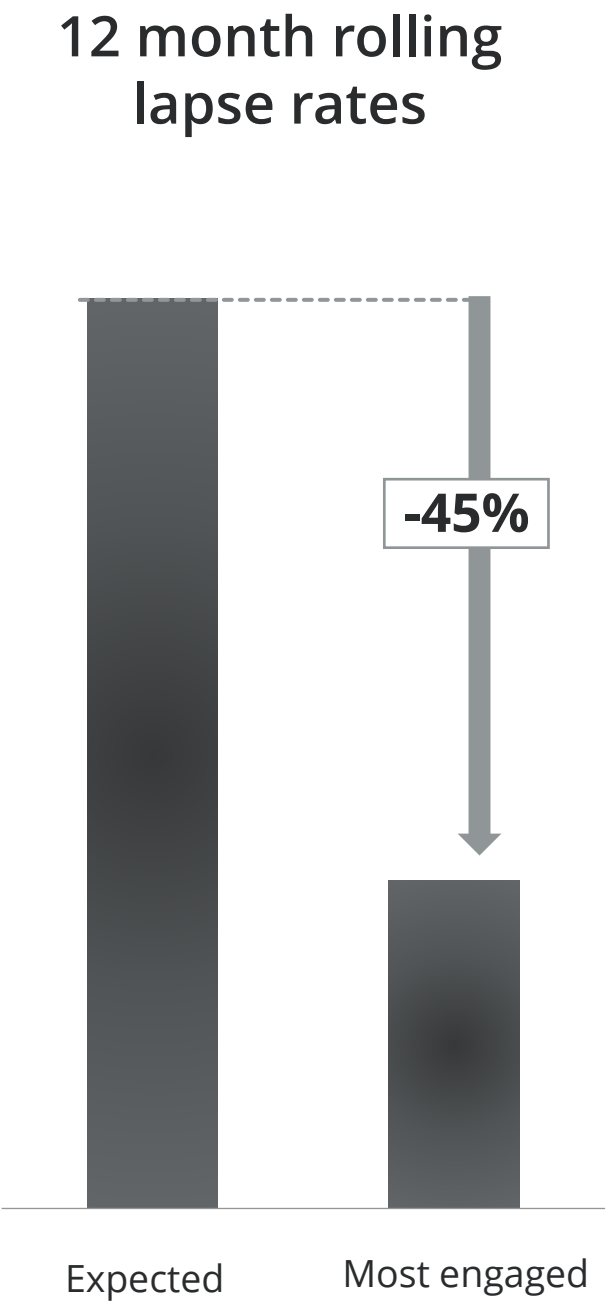
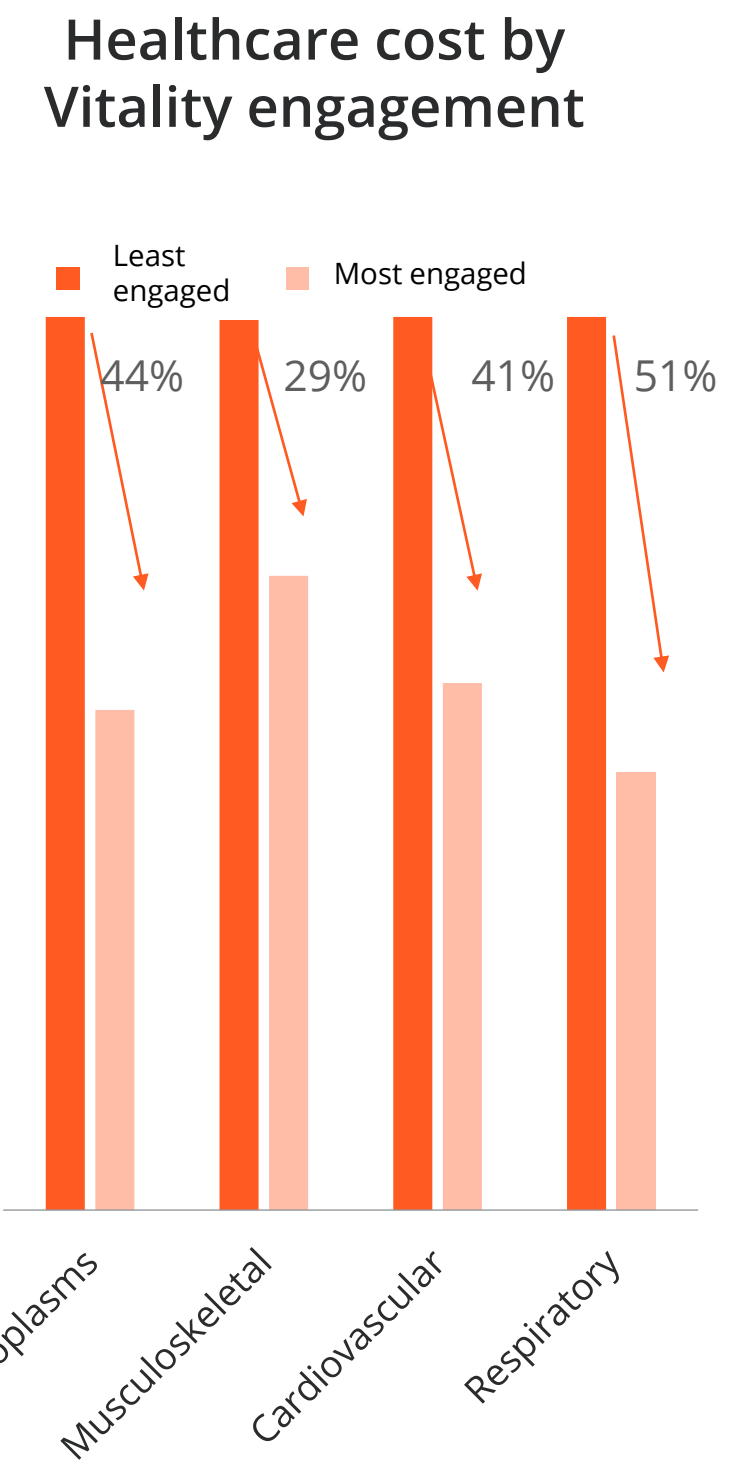
56% Loss ratio



>2x Healthy prevalence



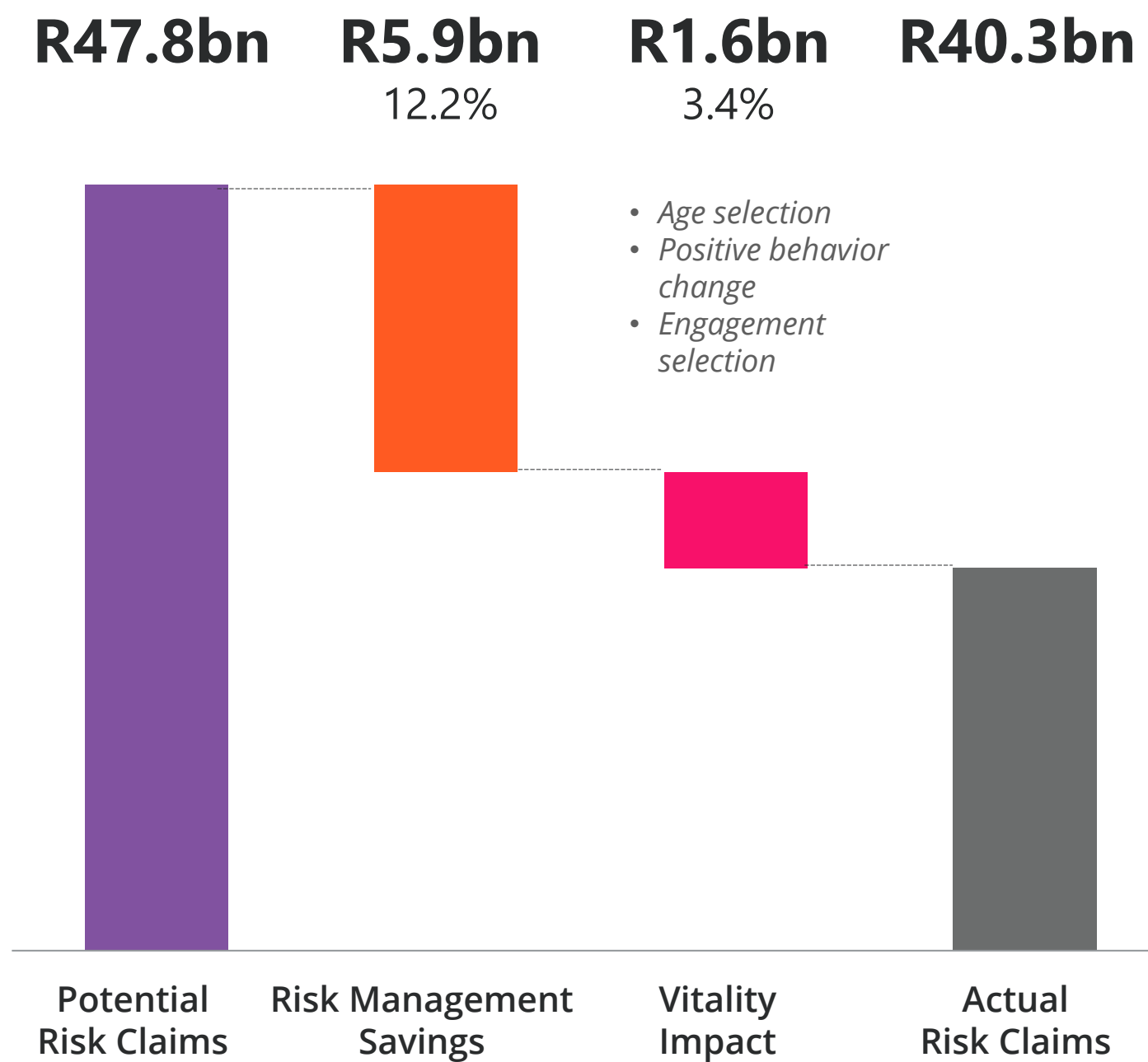
+169% Increase in physical activity





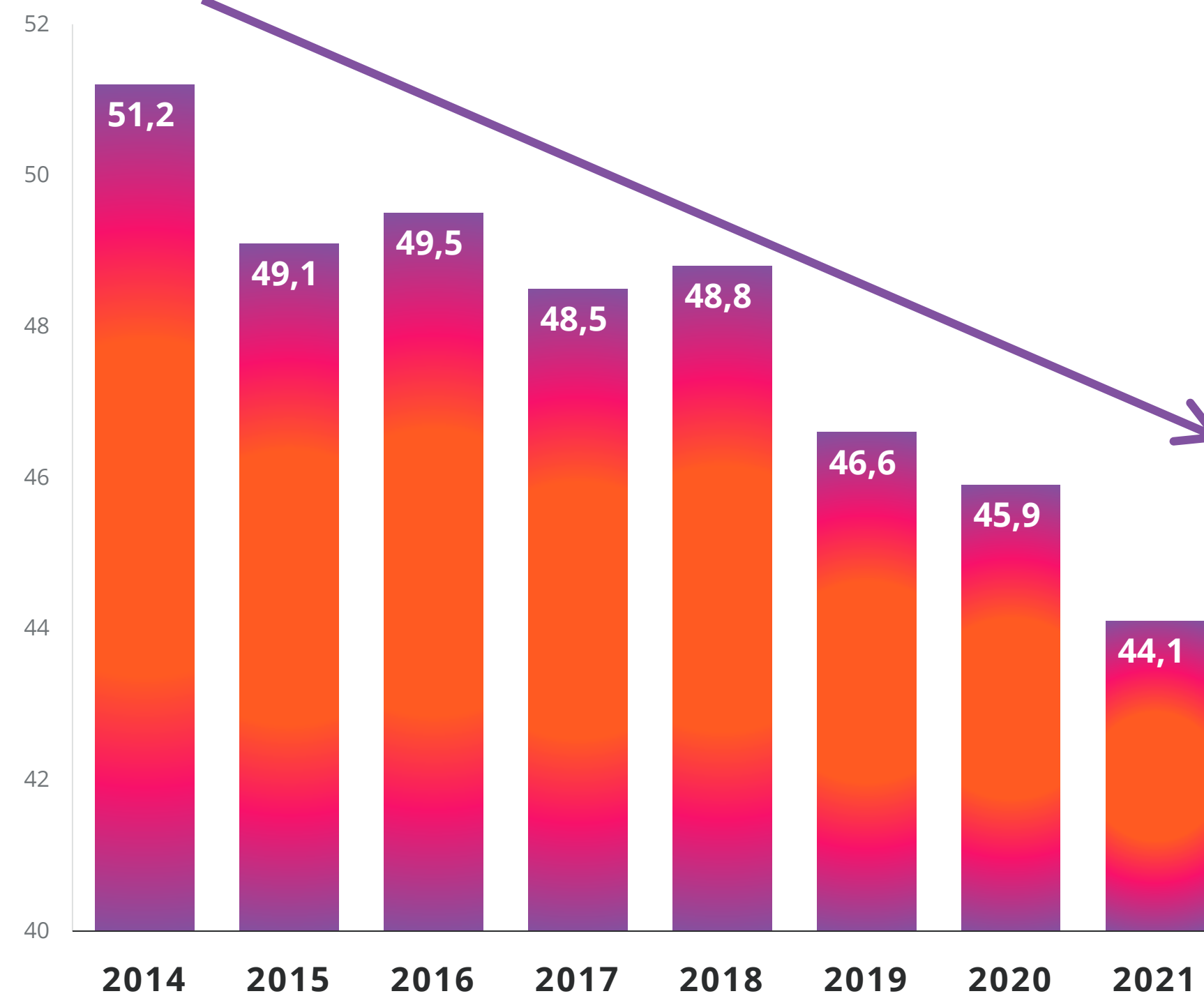
These technologies have enabled significant and sustained improvements in health insurance performance

Impact on health insurance claims



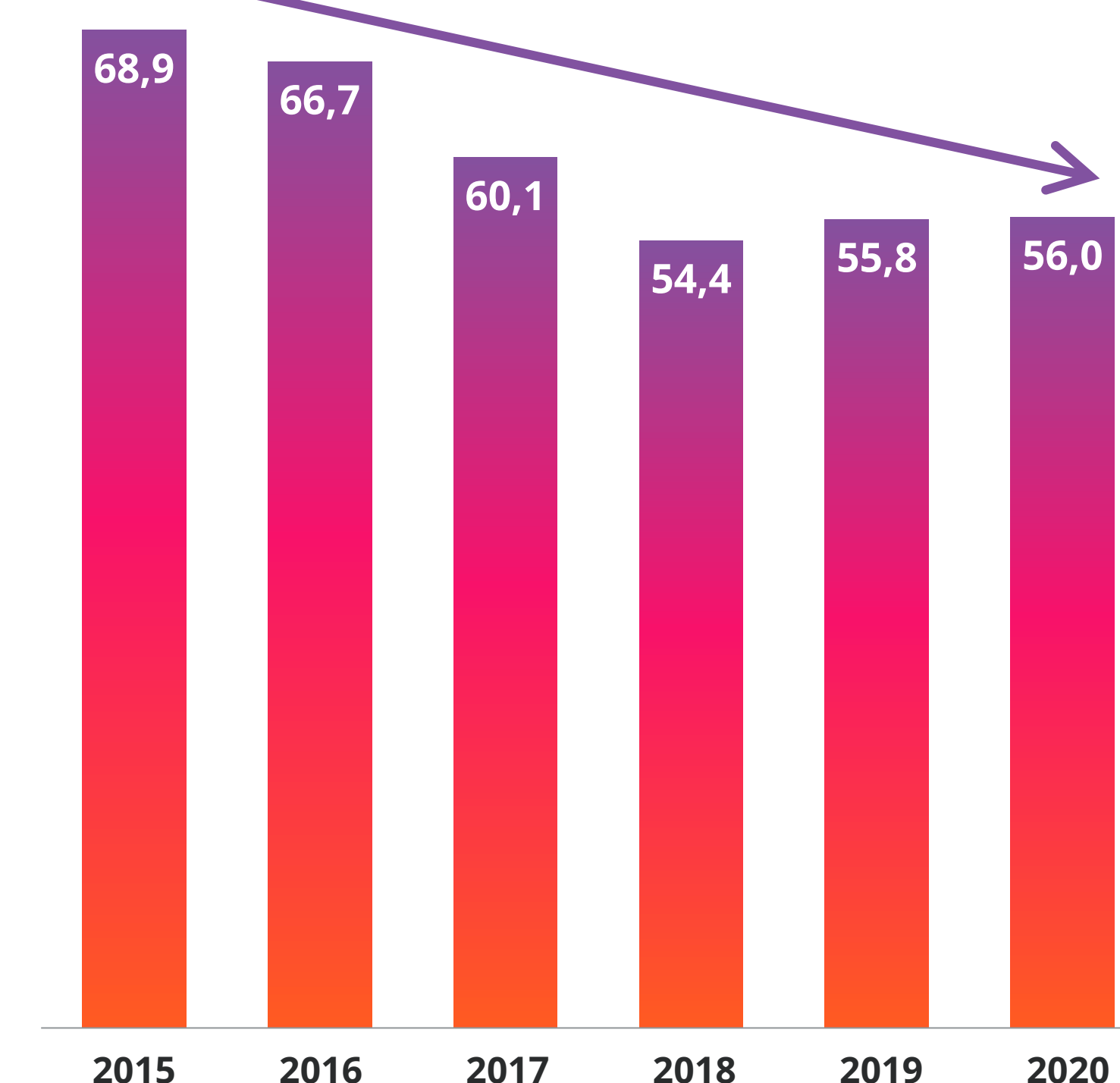
15.6% effective reduction in health insurance risk claims

Impact on operational costs



7% Reduction in Operating cost PMPM

Loss ratio (%) over time



12.9% absolute reduction in health insurance Loss Ratio



Thank you

