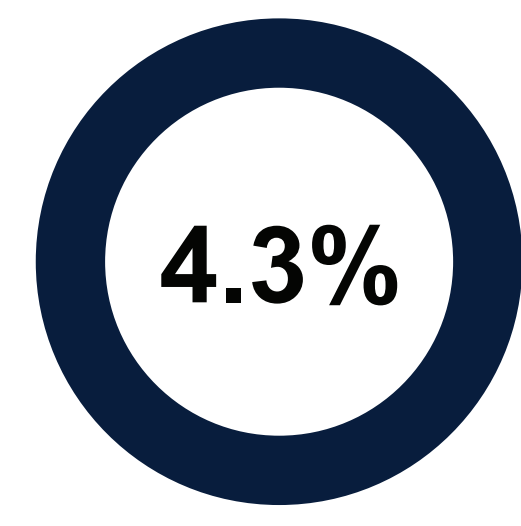


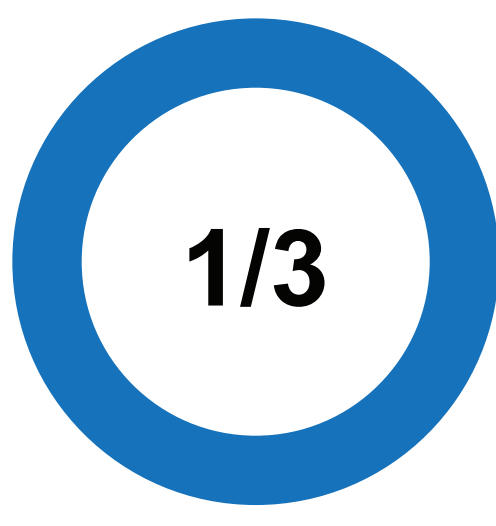
WHY HEALTH PLANS NEED AI TO SUCCEED



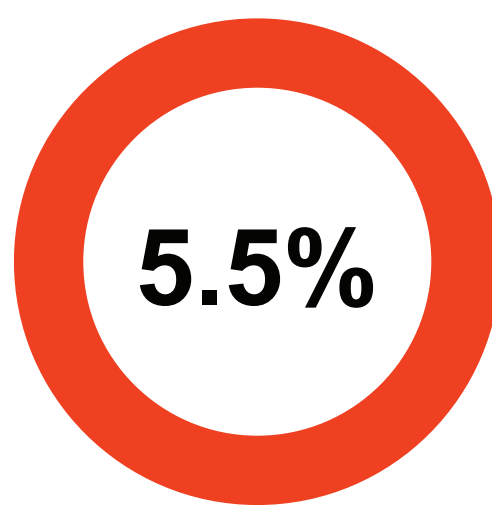
GROWING PRIVATE HEALTH PLAN EXPENDITURES



National Health Expenditures (NHE) grew 4.3% in 2016 to \$3.3 trillion



Private health insurance spend made up a third of total (\$1.1 trillion)



NHE are expected to grow 5.5% a year, reaching \$5.7 trillion by 2026



Private health insurance expenditures expected to rise 4.7% per year over next decade

TRADITIONAL HEALTH PLAN STRATEGIES



Basic Statistical Methods



Rules-based techniques



Target solutions for average patient or population

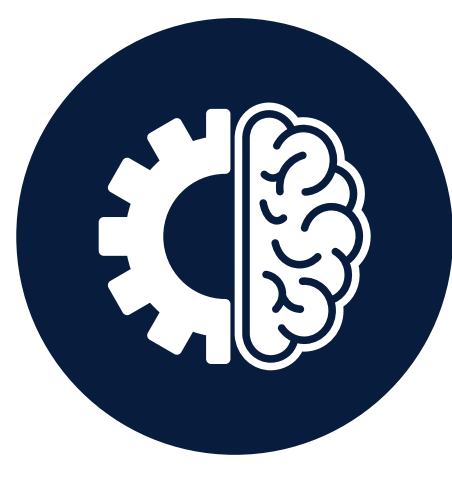
INCREASING VARIETY AND VOLUME OF HEALTHCARE DATA

- Near universal use of Electronic Health Records (EHRs) by hospitals and physicians
- Growth of Natural Language Processing (NLP) to convert the 75% of unstructured healthcare data into usable information
- Increase in imaging and genetic screening data
- Rising use of wearables (devices to monitor behavior, health conditions)



WHY AI AND MACHINE LEARNING ARE POISED FOR IMPACT

Four Machine Learning Accelerants



Better Algorithms
advances in deep learning



More Infrastructure
cloud-based machine learning services



Faster Processing
graphical processing units (GPUs) reducing training time for neural networks



More Health-Related Data
cost of genomic sequencing plummeting

WHAT AI AND MACHINE LEARNING MEAN FOR HEALTH PLANS

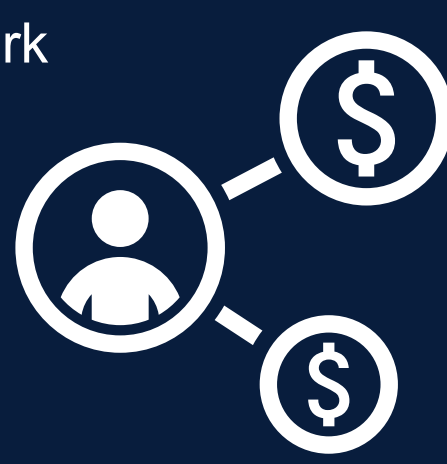
Unleash the power of precision medicine

- Mine data for insights to impact individual members rather than population “averages”
- Shift from disease treatment to early detection
- Create “digital replica” of each patient to compare to latest evidence-based guidelines
- Optimize early and targeted interventions to drive better outcomes
- Deliver personalized care pathways



Reduce healthcare costs

- Lower costs through improved resource utilization
- Efficiently identify high risk patients
- Proactively intervene to prevent negative, costly outcomes
- Measure and monitor adherence to therapies
- Enhance patient engagement
- Identify and manage clinician best practices across network



Target high users

- Minimize emergency room visits in metro areas (increased 22% in last five years)
- Identify vulnerable populations with complex social components, high behavioral health needs, multiple chronic conditions
- Enable early and frequent engagement to provide support, resources and education

Improve operational efficiency

- Improve utilization management
- Enhance wellness and care management
- Optimize complex case management – 46% of chronically ill patients fail to receive recommended care

Design innovative health system models



Evaluate network and benefits accurately



Transition from “one-size-fits-all” strategy to customized precision medicine approach



Migrate from population-based to personalized drug formularies



Discover underlying mechanisms, treatment patterns, and care practices that drive performance



Obtain key insights to design models crucial to effective value-based care

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