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AI Optimism and the Race for Talent

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Analytics continue to evolve, increasing in maturity over time

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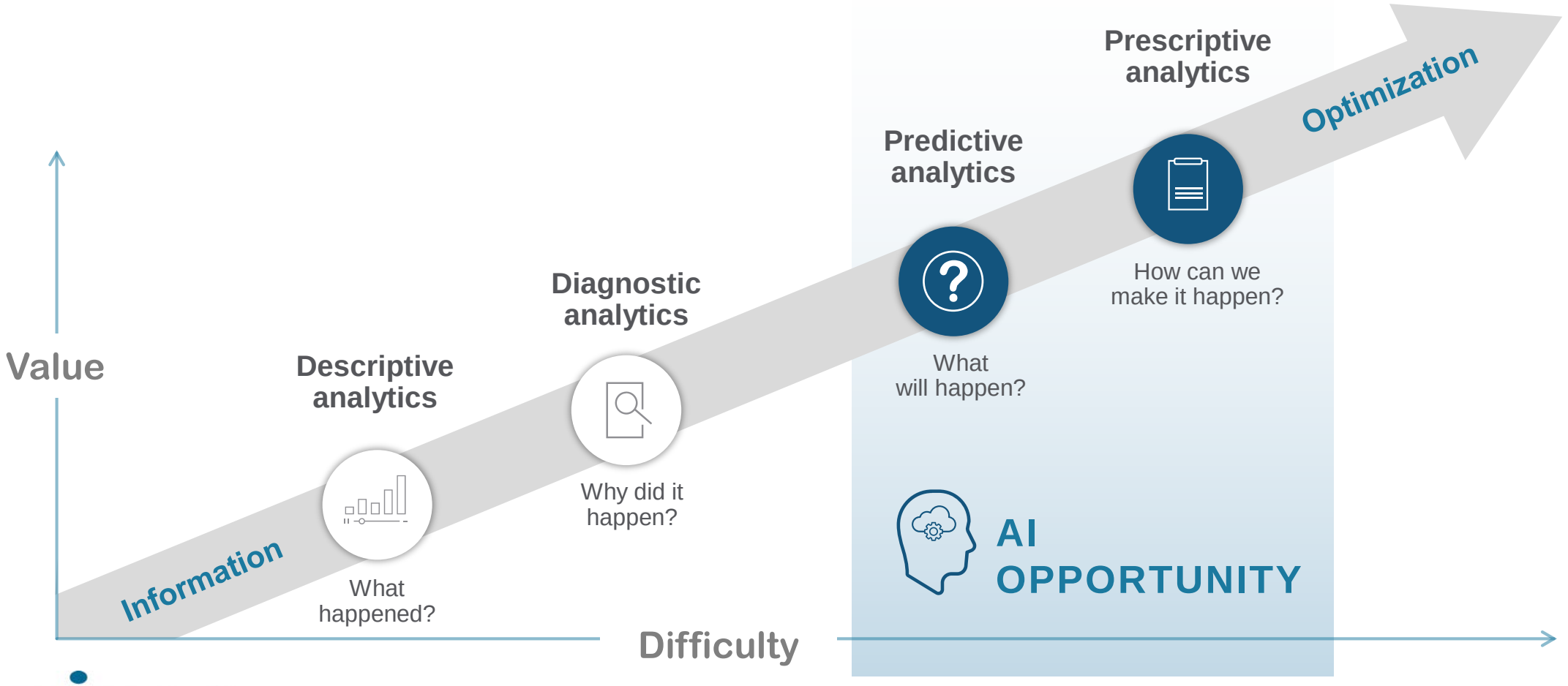

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Source: Gartner's analytics maturity model.

Research shows increasing optimism and investment for artificial intelligence (AI) in health

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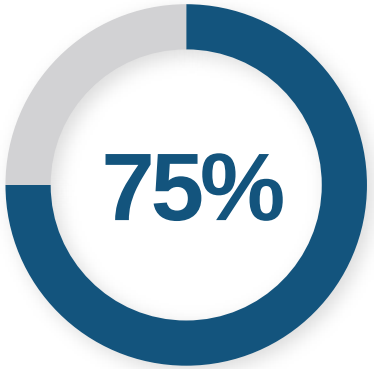
Most reliable path toward better health care



Implementing or developing an AI strategy

Confident they will see an ROI on investments

$32.4M **average investment per organization** on AI implementation over the next five years

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Source: OptumIQ Annual Survey on AI in Health Care 2018.

AI strategies will be deployed first to reduce administrative tasks

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43% Automating business processes, such as administrative tasks or customer service

36% Detecting patterns in health care fraud, waste and abuse

31% Monitoring users with Internet of Things (IoT) devices, such as wearable technology

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Source: OptumIQ Annual Survey on AI in Health Care 2018.

Current AI opportunities in health care

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Better performance

- Clinical documentation
- Coding
- Payment integrity
- Prior authorization

Better outcomes

- Early diagnosis and treatment
- Prescription benefit management
- Risk adjustment
- Simplified population analysis

Better experience

- Call centers
- Care coordination
- Employee benefits

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Use cases: Approach a real problem

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Example: Patient conditions like Atrial fibrillation can be difficult to detect

20–30% cases undiagnosed

Intermittency…

A-fib can be fleeting and intermittent; symptoms can be vague, so many patients don't seek care.

…means a difficult diagnosis

ECG can be *misinterpreted,* events can go *"uncaught"* or symptoms can be *attributed to other illnesses* (e.g., panic attack).

Lengthy diagnosis

A-fib must be confirmed with *ECG tracing.*

If ECG doesn't "detect" the episode, an *ambulatory Holter monitor* is worn for 24–48 hours.

If events are infrequent, a *cardiac event monitor* can be worn over a prolonged period.

Costly to manage

Cost of treating strokes per patient, per year:

If left untreated

$75,000

If treated with anticoagulation

$4,000

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OPTUM IQ™

AI IN ACTION
MACHINE LEARNING

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westmed medical group

250,000
Total primary care patients

75,000
Patients older than 50

3,750
Patients treated for A-fib

- Model was trained on 2.5M lives in dNHI.
- Model ran against 1,000 WestMed members without A-fib and 100 with A-fib/ flutter.

Able to detect almost 70% of patients who were diagnosed with A-fib.

Based on results, WestMed's clinical team requested expansion with 60,000 additional members and several more cardio-vascular conditions.

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Inside the AI ‘black box’

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Data

Analytics

Health care expertise

TECHNOLOGY
INFRASTRUCTURE

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Talent, not technology, is often the biggest roadblock

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Health organizations seeking to hire experienced staff will likely face talent shortages.

91% of executives agree hiring candidates with AI experience is a priority for their organization.

45% of health care leaders estimate more than 30% of new hires in positions engaging or implementing AI within the next year.

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Source: OptumIQ Annual Survey on AI in Health Care 2018.

A practical approach to your analytics “people plan”

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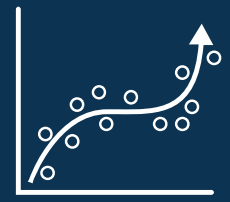
Supporting the foundation

Moving toward risk and managing populations



Predictive analytics, AI, advanced use cases

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The job to be done

- Standard report writing
- Ability to pull data across departments and facilities
- Translation of data into actionable insights

Talent required

Analytics specialists who are proficient analytically as well as knowledgeable about the area they support (e.g., clinical, financial, etc.)

Common pitfalls

- Lack of data governance
- Talent who are deep analytically or clinically — but not both
- Lack of analytics operating model

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Moving toward risk and managing populations

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The job to be done

Culling of insights about your system and population including leakage, network efficiency, cost, and disease trends across complex and disparate datasets

Talent required

Analytics specialists who can analyze and visually depict specialized datasets, including claims and EMR data, social determinants of health, etc.

Common pitfalls

- Limited expertise driving insights by stitching together multiple datasets including claims and EMR
- Having non-actuaries attempt actuarial analysis

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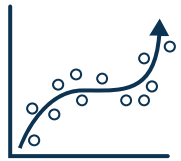

Predictive analytics, AI, advanced use cases

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The job to be done

Building large predictive models and training those models with large datasets across clinical and financial realms

Talent required

- Analysts
- Data scientists
- Solutions architects
- Translators

Common pitfalls

Underestimating the intensity of demand for this talent

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Building your AI team

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STRATEGY
C-suite oversight

ANALYTICS LEADER
Provides link **across IT, analytics and business**

DATA SCIENTISTS AND ANALYSTS
Hire for skill, train for health care

TRANSLATORS
Connect strategy and context to tech

SOLUTION ARCHITECTS
Oversee project roadmap

DATA OWNERS  **IT DATA SPECIALISTS**  **ANALYTICS DEVELOPERS**

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Thank you

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