

# **Overview**

- Introduction
- Industry overview
- Health IT buzz
- Industry challenges
- Practical requirements for solutions
- Real-world examples
- Evolving trends
- Takeaways
- Q/A







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# **Speaker Intro**



**David Lareau**Chief Executive Officer

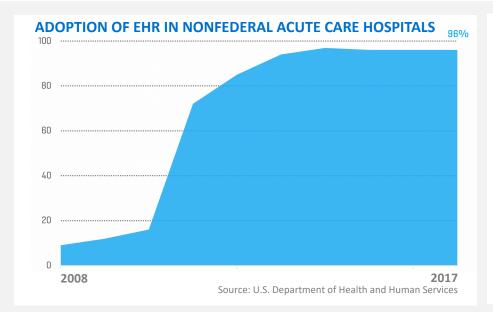


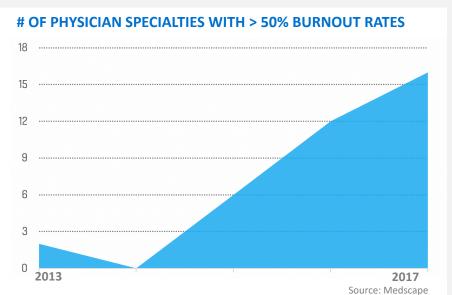
**Jay Anders, M.D.**Chief Medical Officer



# **Industry Overview**

- EHR adoption levels since HITECH Act: up from <30% to 90+% overall<sup>1</sup>
- Data is largely unstructured, fragmented and inconsistently stored
- Data sharing infrastructure still nascent
- Lack of incentives to promote data sharing
- 50+% of US physicians express feelings of burnout; EHR is a top contributor<sup>2</sup>
- Constant hype about panacea solutions that don't live up to their promise



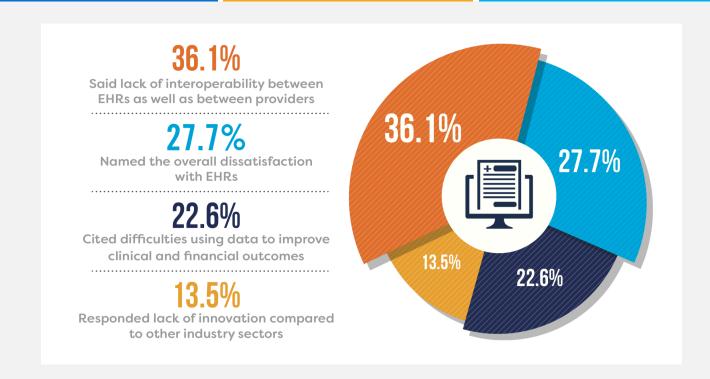


1) Office of the National Coordinator, (2019, June), Health IT Dashboard 2) Herbert, Fred et al, (2018, Aug 1), Physician Burnout: Consequences, Causes and Cures



# **EHR Usability and Physician Satisfaction**

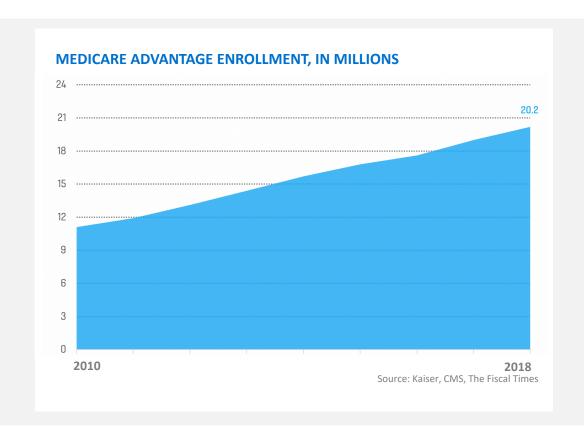
- Poorly built EHR documentation modules create inefficiencies that fuel physician burnout
- Data sharing between disparate systems is difficult without "clean" data
- Physicians and not EHRs should dictate clinical workflows
- The future of clinical applications is mobile-first and multi-device

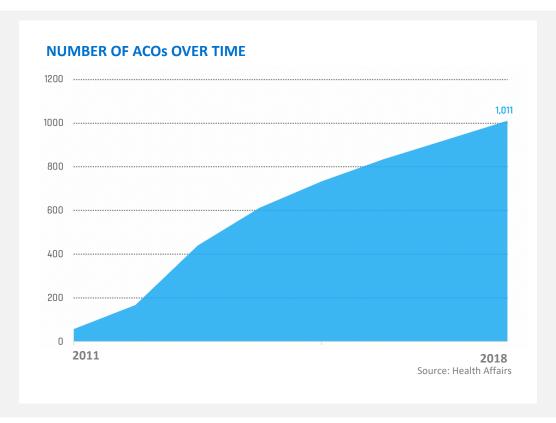




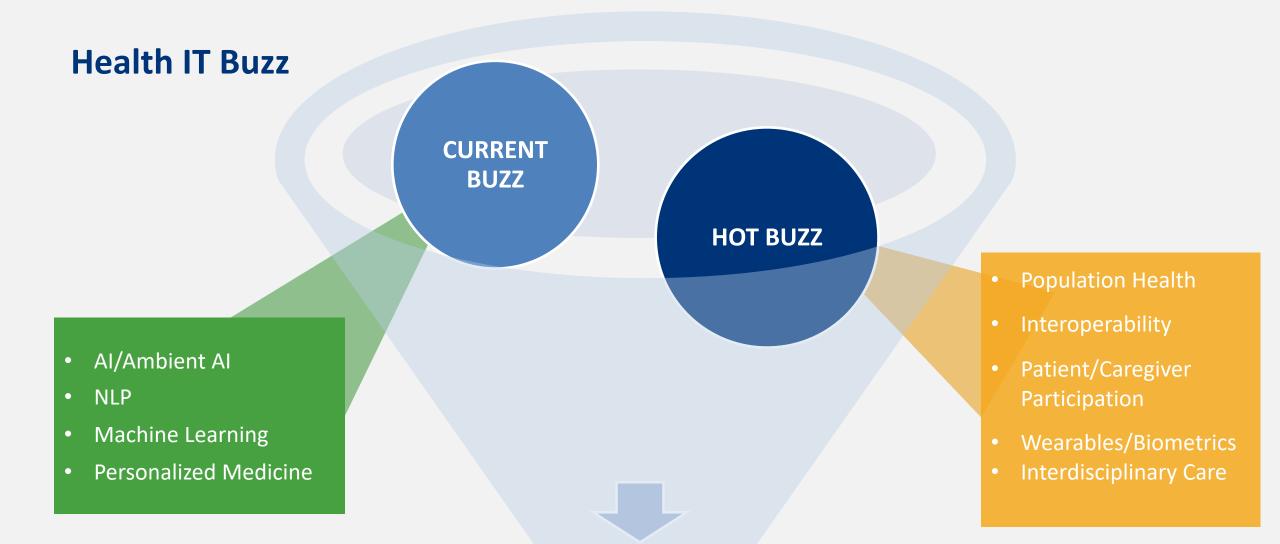
## **Value-Based Payment Requires Clinical Data**

- Value-based payment models, including Medicare Advantage, are becoming the norm
- Value based payment requires ready—access to granular clinical data to monitor performance









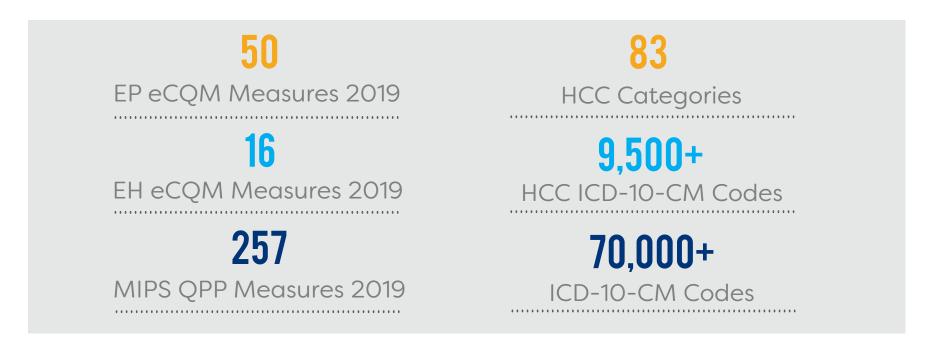
# All Require GOOD, CLEAN, CLINICAL Data



# **Challenges**

Computable clinical data is needed to solve these issues, but:

- Unstructured data, disorganized, siloed data
- Explosion of terminologies, quality measures, HCCs, all needing data to predict and control clinical risk
- Providers cannot find data at the point of care
- Growth of outcomes-based reimbursement (Medicare Advantage & other risk-sharing arrangements)





# What's Needed to Fix Things

- Computable clinical data at the point of care (not hours, days, or weeks later based on pop health analytics)
- Al supporting clinical decision-making and workflows in realtime
- Tying all information together so it can be accessed instantly
- Integration of clinical teams (care plans, workflows, data)





# **The Upcoming Clinical Data Wars**

- Data is now more valuable than oil<sup>1</sup>
- Monetizing clinical data is the future<sup>2</sup> and could be what's needed to drive interoperability
- Organizations (and AI) need reliable, clean, usable data, and systems that can make sense of that data – garbage in, garbage out



- 1) The Economist, (2017, May), <u>The World's Most Valuable Resource is no Longer Oil but Data</u>
- 2) Healthcare IT News, (2019, Dec), The Economy of Connecting



# **Practical Requirements**

### Information Sources

- Clinical Notes (Narrative)
- Coded Data

## Clinical AI Capabilities

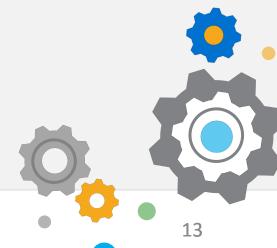
- Quality care initiatives
- Intelligent presentation of data
  - CDS at the point of care
  - Clinically relevant filtering
- Audit-proofing for value-based payment

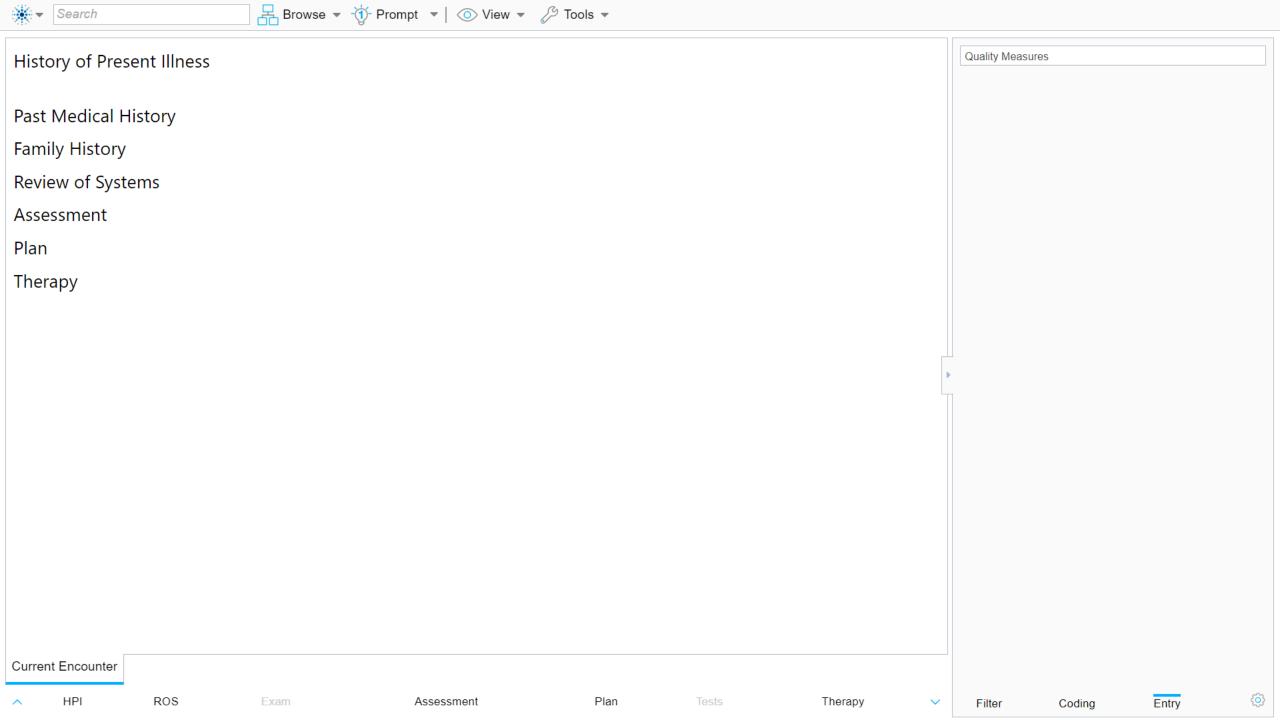


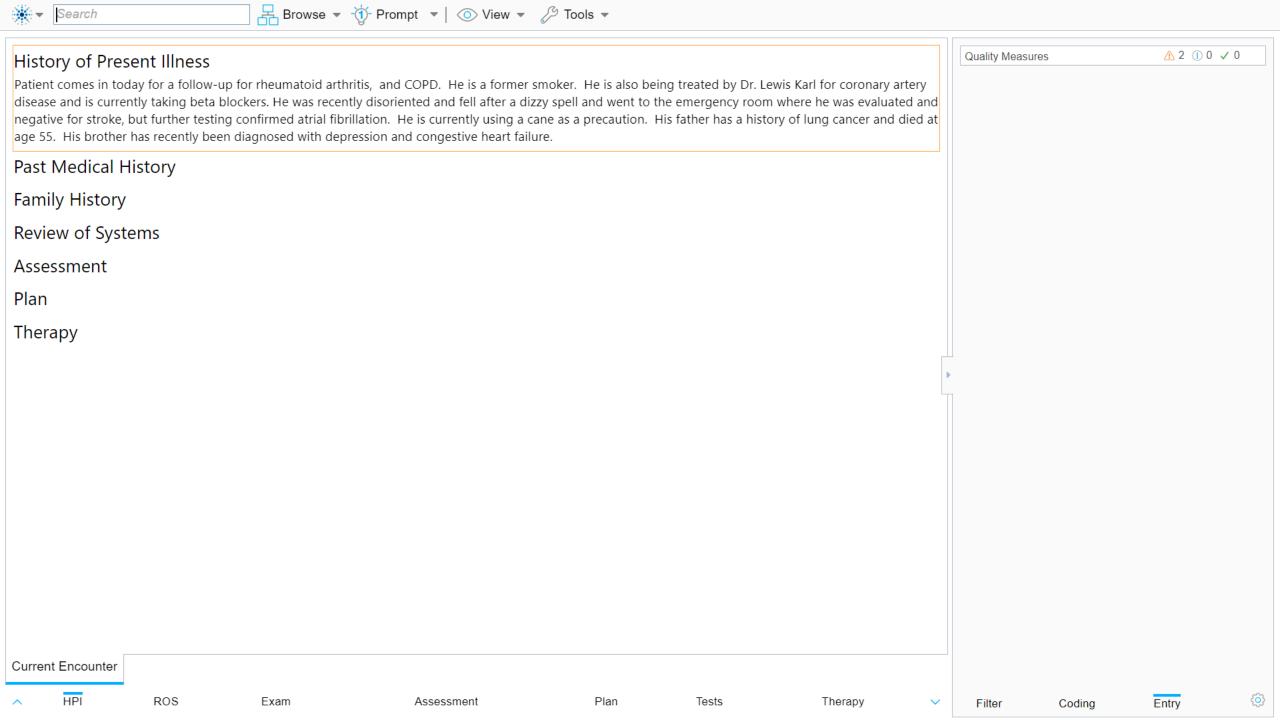


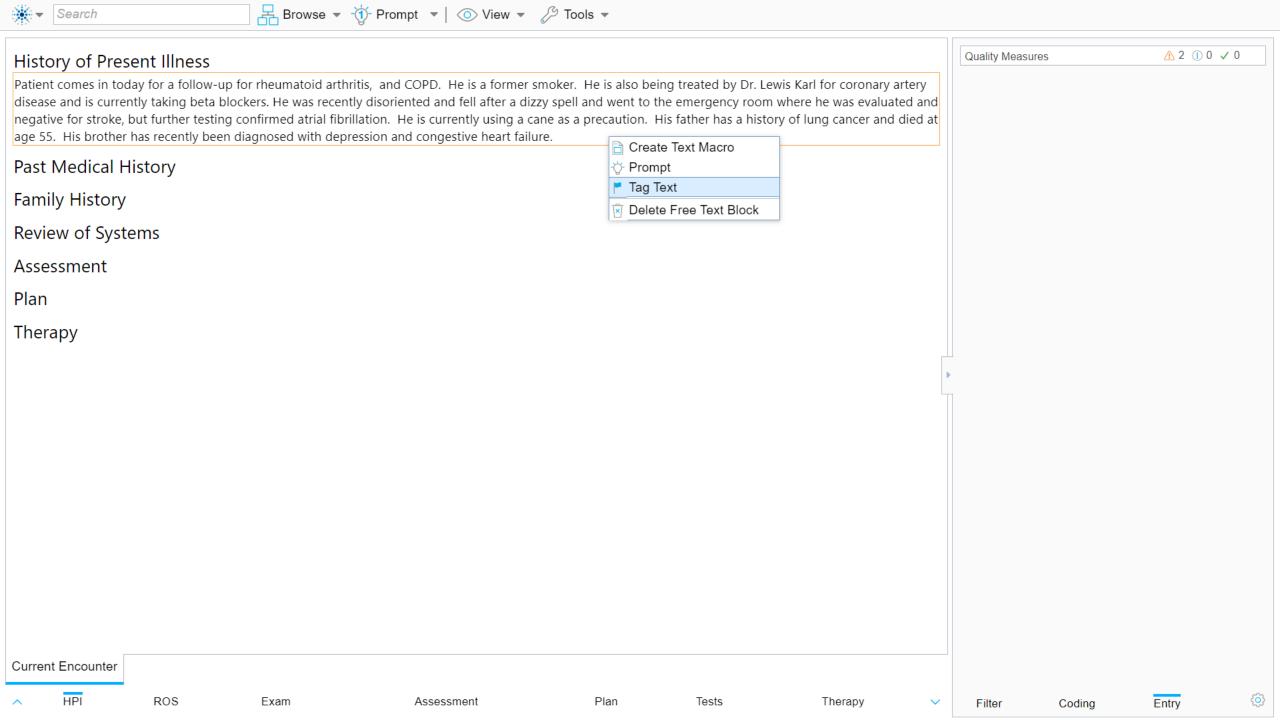
# Narrative Text to Data to Quality Metrics (NLP)











#### History of Present Illness

Patient comes in today for a follow-up for rheumatoid arthritis, and COPD. He is a former smoker. He is also being treated by Dr. Lewis Karl for coronary artery disease and is currently taking beta blockers. He was recently disoriented and fell after a dizzy spell and went to the emergency room where he was evaluated and negative for stroke, but further testing confirmed atrial fibrillation. He is currently using a cane as a precaution. His father has a history of lung cancer and died at age 55. His brother has recently been diagnosed with depression and congestive heart failure.

#### Past Medical History

Reported Physical Trauma: fall;

#### Personal History

Behavioral History: previous history of smoking;

#### Family History

Paternal History: lung cancer; overall condition: expired;

Fraternal History: congestive heart failure; depression;

#### Review of Systems

Neurological Symptoms: dizziness; disorientation;

#### Assessment

atrial fibrillation; coronary artery disease; chronic obstructive pulmonary disease; rheumatoid arthritis; no stroke syndrome;

#### Plan

beta adrenergic blocking agents;

Therapy

**Quality Measures** 



#### Incomplete

- Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy
- ⚠ Chronic Obstructive Pulmonary Disease (COPD): Inhaled Bronchodilator Therapy
- Chronic Stable Coronary Artery Disease (CAD): Antiplatelet Therapy
- ⚠ Falls: Screening for Fall Risk
- ⚠ Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention
- A Rheumatoid Arthritis (RA): Functional Status Assessment
- A Rheumatoid Arthritis (RA): Glucocorticoid Management
- A Rheumatoid Arthritis (RA): Periodic Assessment of Disease Activity
- ⚠ Rheumatoid Arthritis (RA): Tuberculosis Screening

Current Encounter

HPI

ROS

Assessment

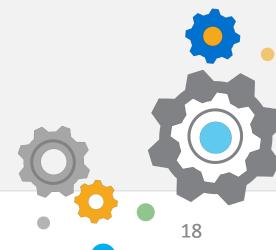
Plan

Therapy

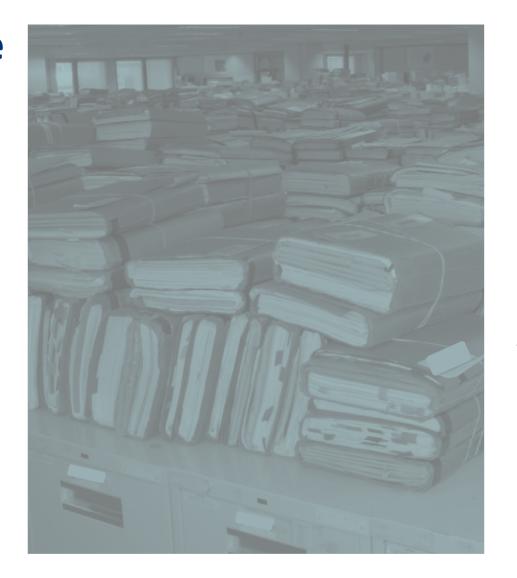
Filter Coding Entry

# **Making Sense of Data from Disparate Systems**





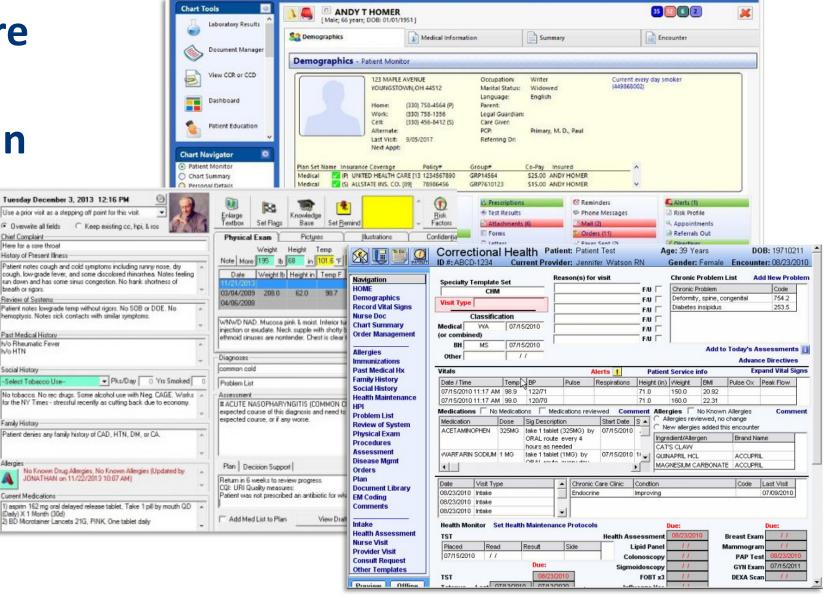
# Remember the Days When...



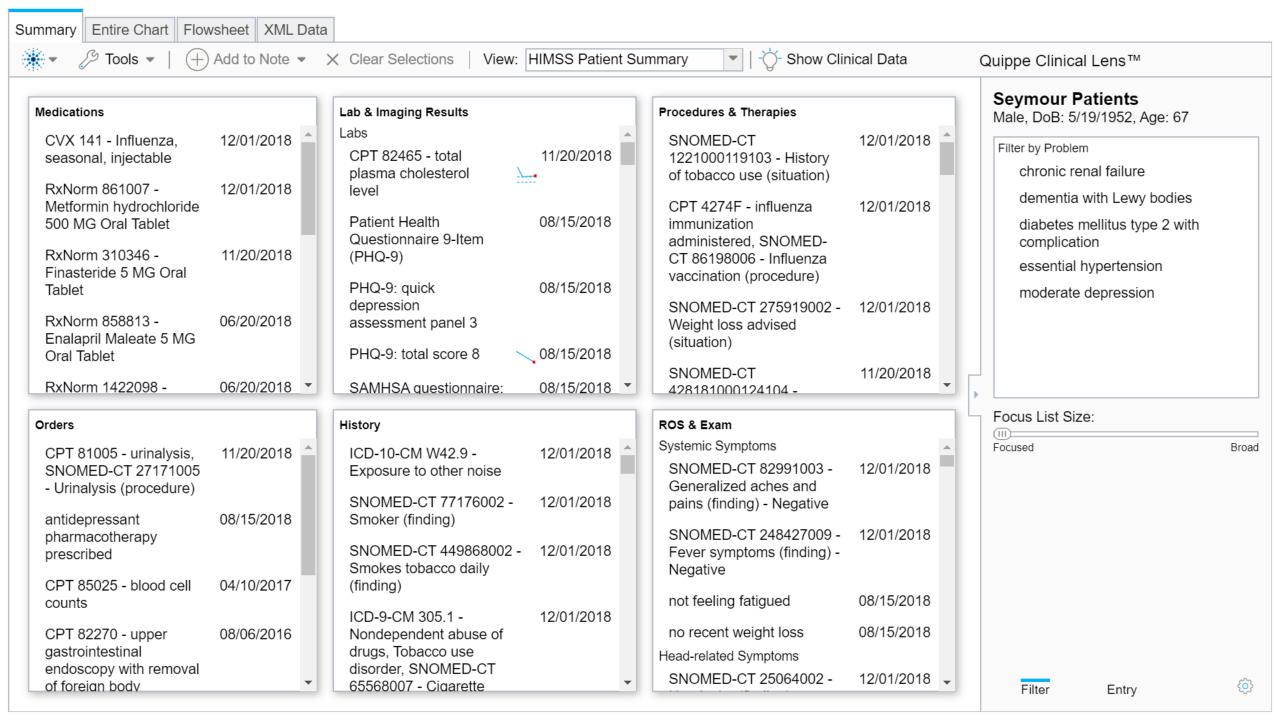
Unfortunately, this scenario is the same but has shifted into the world of technology.

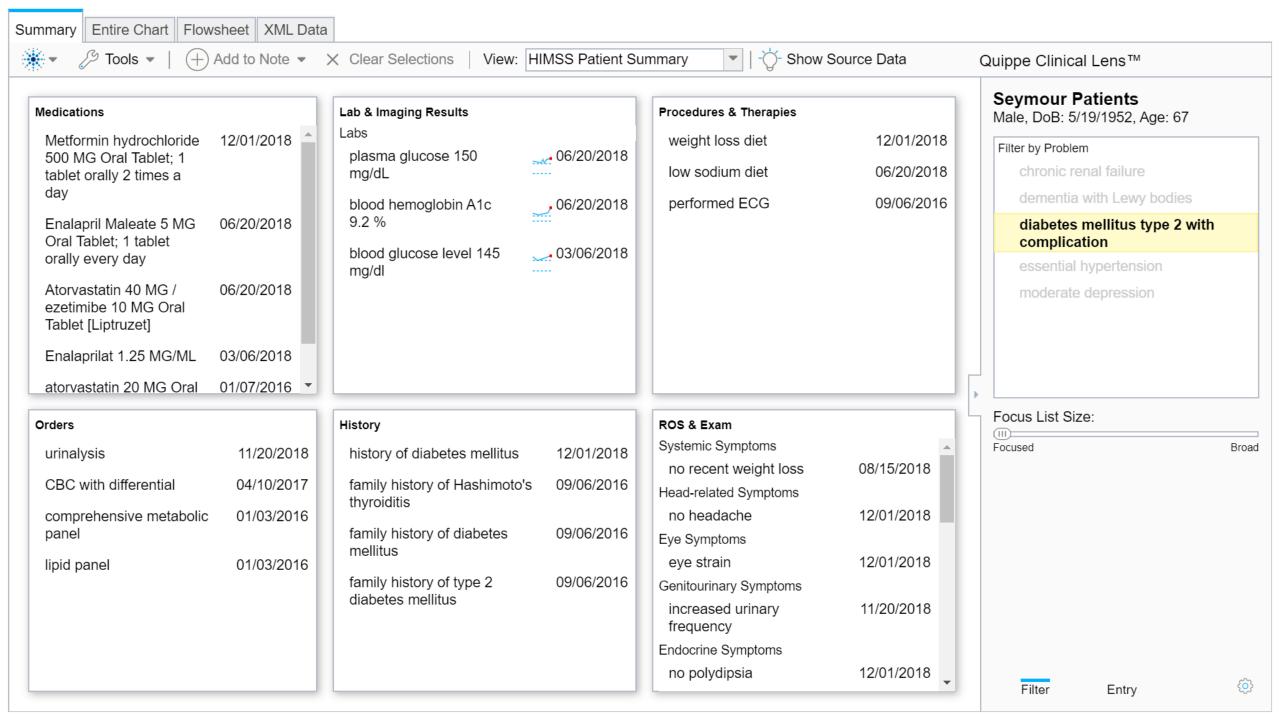


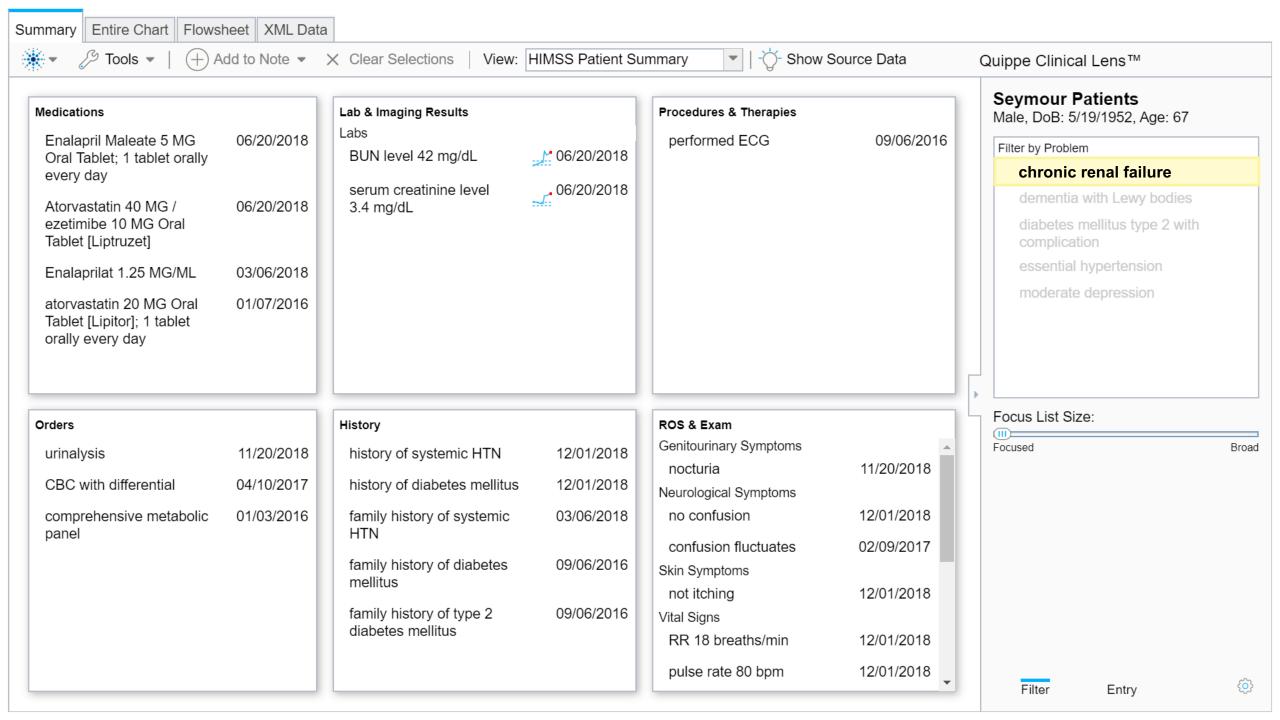
Finding what you're looking for in today's systems can be challenging





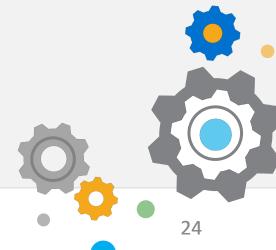


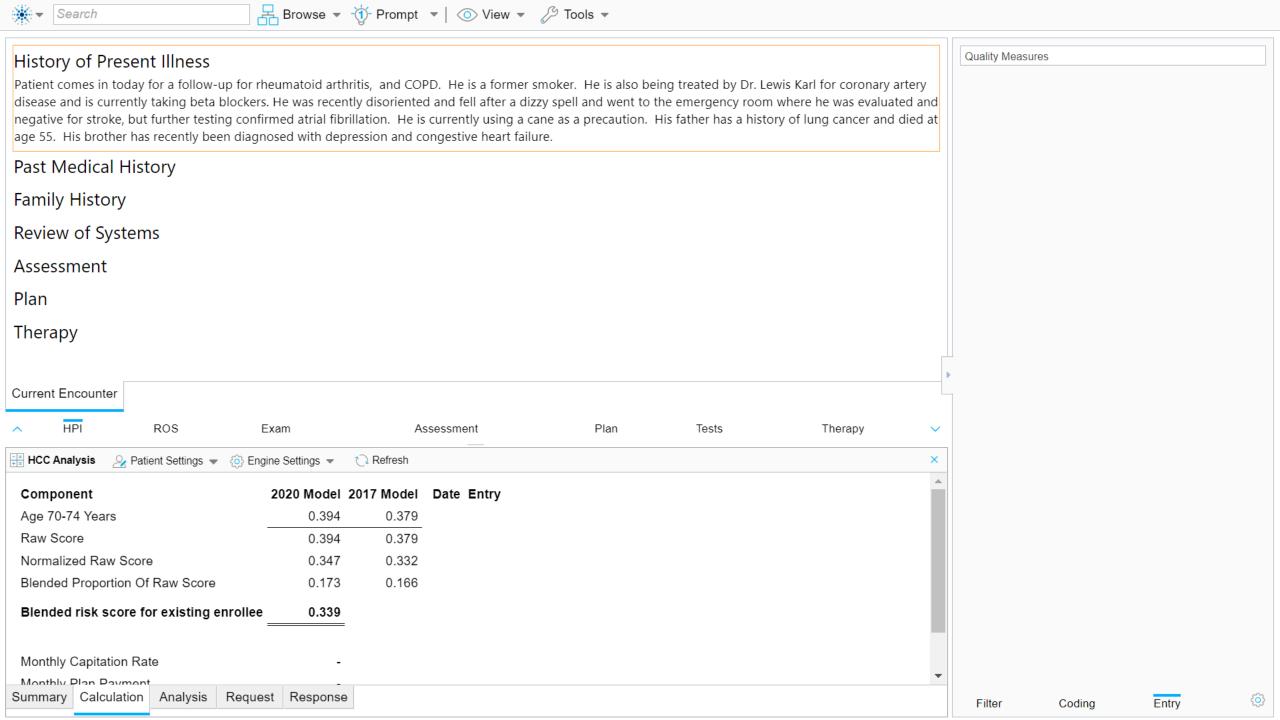


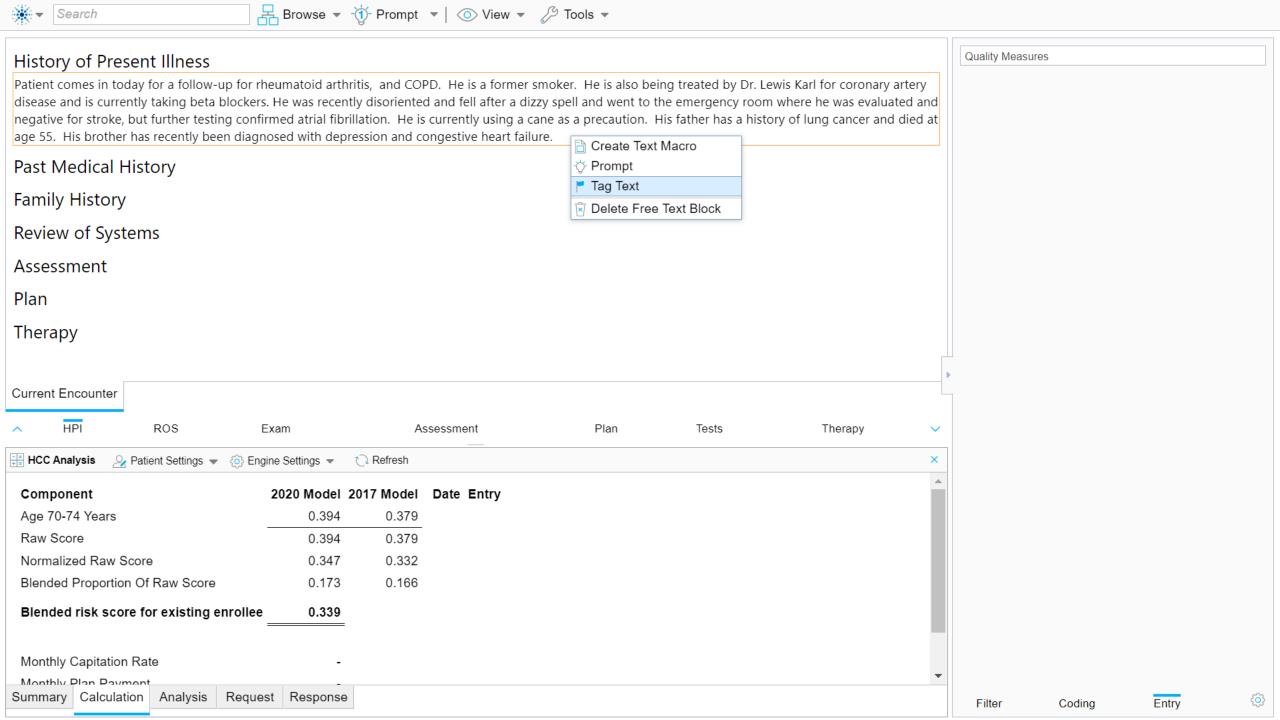


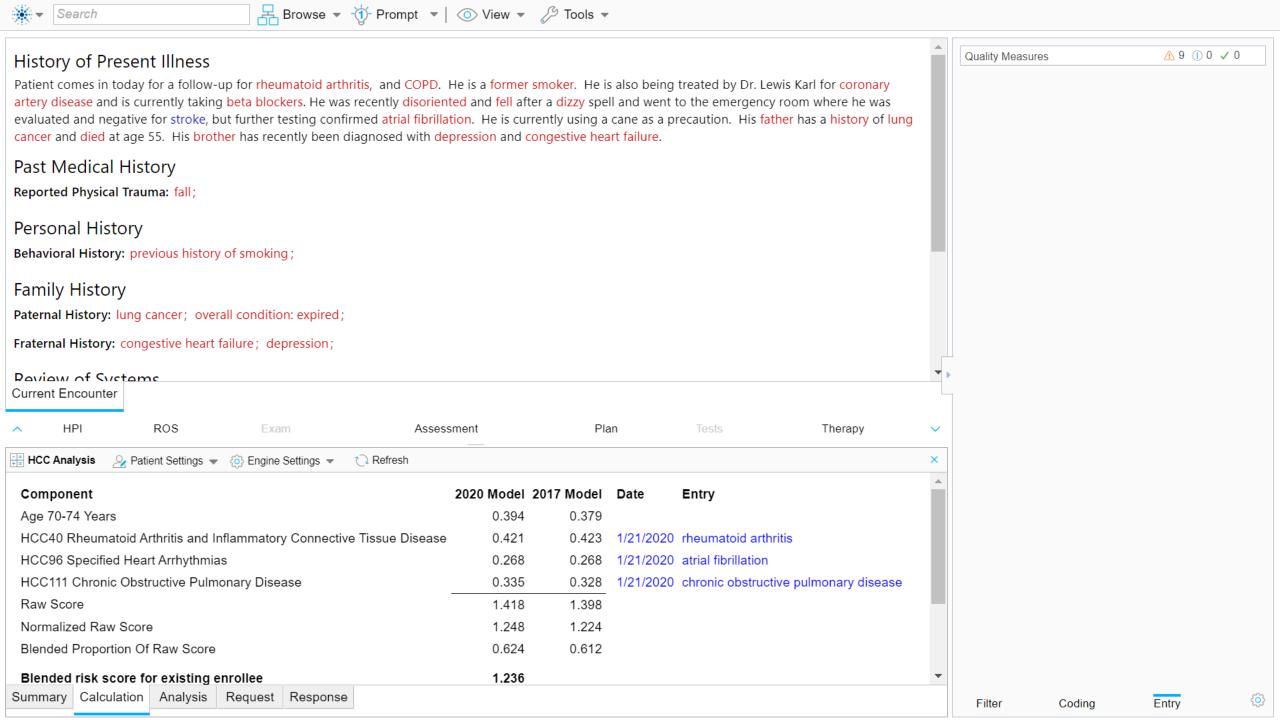
# **Audit-proofing for Value-based Payment Systems**

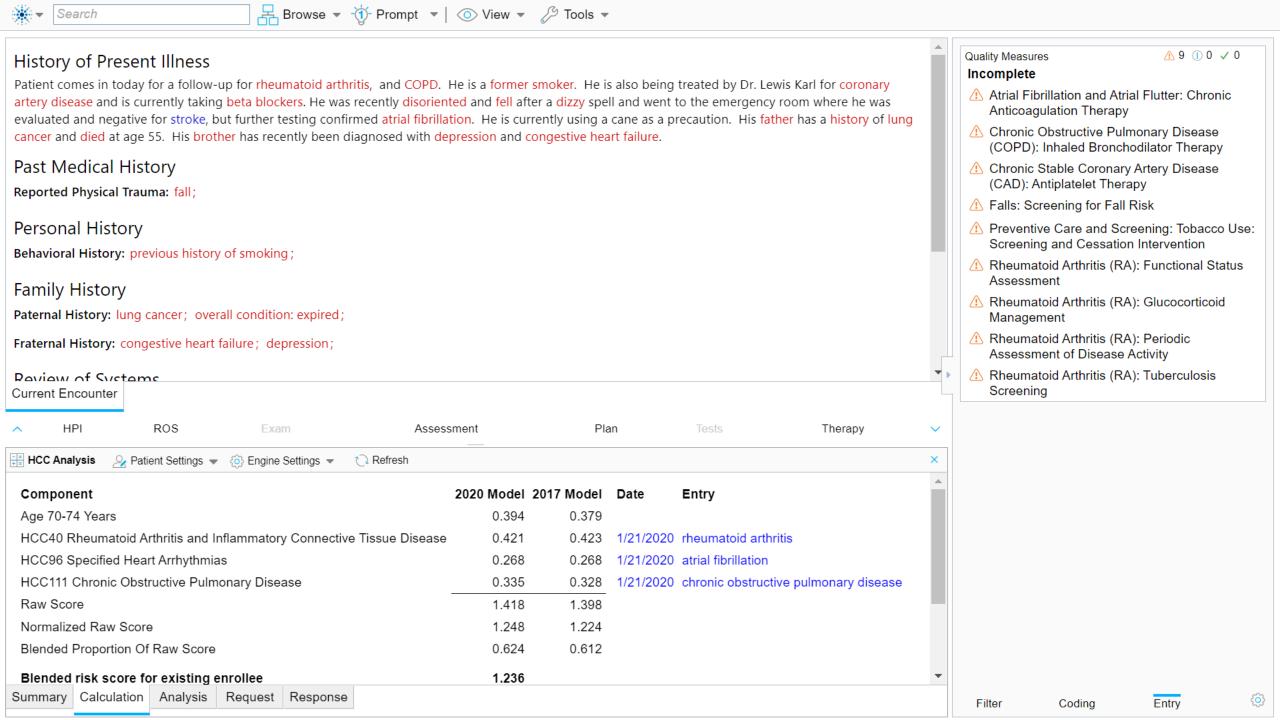


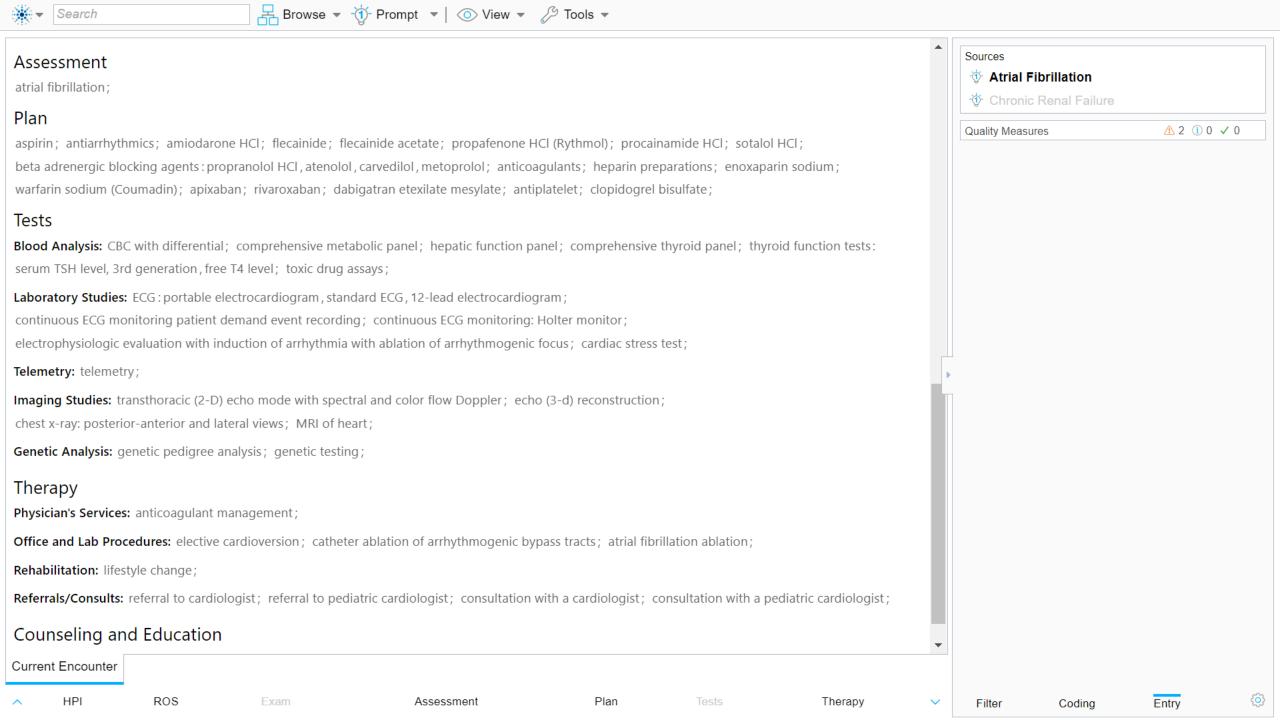












# **Evolving Trends**

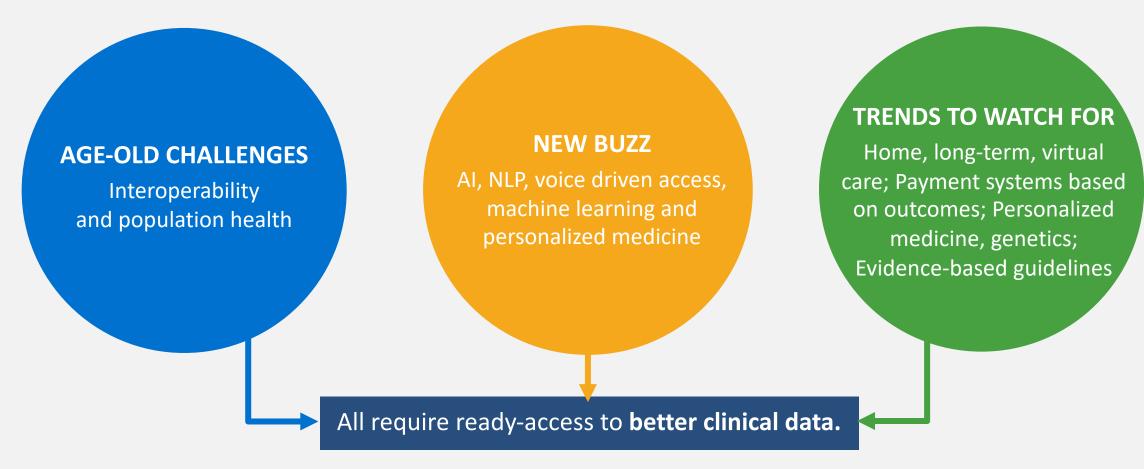
- Aging population will result in more home, virtual and longterm care
- Increasing shift to reimbursement based on "measurable outcomes"
- Delivering evidence-based guidance in real-time to ALL caregivers
- Personalized medicine and genetics

All will require better data.





# Solving Health IT's Biggest Challenges in 2020 and Beyond



**Data on its own is not enough.** Need **clinical AI engines** with expert intelligence that make sense of data and can support clinical decision making and workflows in real-time



# Need help implementing these solutions?

Director of Business Development & Strategy jaita@medicomp.com







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