Patients, Physicians, Pharmacists: A New Generation of Insights
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Learning Objectives

• Describe the challenges clinicians and pharmacists face today with data blind spots
• Introduce the interplay between care gaps and the management of chronic conditions
• Discuss potential pathways forward for population health management
Understanding Data

In 2011, the volume of healthcare data reached 150 exabytes.¹

Medical information doubles in volume every five years.³

At projected growth rates, the volume of healthcare data will soon be zettabyte and yottabyte scale.²

The U.S. healthcare system could reduce costs by 12 to 17 percent, or between $300bn and $450bn, through better use of data.⁴
Understanding Data Blind Spots: For Healthcare Providers

- 80% of data is invisible because it’s unstructured.\(^5\)
- A physician would have to read as many as 160 hours a week to keep up with new professional insights.\(^6\)
- Information about medication adherence is often not shared with physicians.\(^7\)
Understanding Data Blind Spots: For Pharmacists

Patient medical information is not routinely visible to pharmacists.\(^8\)

Health, wellness, and medication information may influence health care behaviors involving pharmacist care.\(^9\)
Understanding Data Blind Spots: For Patients

More than 63% of key clinical information about patients is missing from the coded data in Electronic Health Record systems.9

Almost 65% of patients wish that their physician offered digital services to access their data.10
Overview

Significant gaps in care – from lack of medication adherence and missed office visits – not only increase healthcare costs, but impact the overall wellbeing of those we aim to serve.

Population health management solutions, specifically those designed to help address chronic disease management, may help further.
The Impact of Chronic Diseases

Chronic diseases are the leading cause of death and disability in the U.S.\textsuperscript{11}

Chronic diseases represent 86 percent of the nation’s $2.9 trillion in annual health spending.\textsuperscript{12A, 12B}

The treatment of chronic disease costs the Healthcare system $1.3 trillion annually.\textsuperscript{13}
Understanding Care Gaps

**Medication Gaps**
Result in $290B in avoidable healthcare costs\(^4\)

**Office Gaps**
Drive $150B in avoidable costs due to missed appointments\(^5\)

**Information Gaps**
Pharmacists & physicians do not have complete information about their patients\(^6\)

30% of health care costs can be saved by addressing inefficiencies in current systems.\(^7\)
A Shared Mission

CVS Health and IBM Watson Health want to enable healthcare practitioners to gain insights from a mix of health information sources – which may help individuals stay on track with their care and meet health goals.

The approach is planned to leverage:

- **CVS Health’s strong insights into medication adherence and pharmacy care**
- **IBM Watson Health’s Cloud and cognitive computing capabilities**
- **Both companies’ expertise in predictive analytics and patient engagement**
Opportunity

Harness the power of two key influencers: provider offices and pharmacies

Use insight driven population health management tools

Operationalize performance, care and patients insights

Possible Future Solution / Actual Features or Function May Differ
A Shared Vision for the Future

Establish coordinated communications with the goal of increasing the possibility of:
- Having face to face conversations with providers and pharmacists
- Improve office visit and medication adherence
John: Using Connected Messaging to Help Potentially Close Office & Medication Gaps

John is 75 years old and suffers from multiple chronic conditions.

He often misses appointments with his primary care physician.

His health records indicate that John is overdue for his office visit and has no appointment scheduled.

John is part of a Pharmacy Benefits Management (PBM) that is administered by CVS Health and has consented to follow-up contacts.

John’s primary care physician Dr. Williams has access to the Phytel Population Health Management solution.
John’s Journey: Potential Scenario #1

This is a hypothetical case study using fictitious medical information and does not represent an actual medical case. The case study is intended to illustrate potential capabilities of this future solution. Actual features and capabilities may differ.
Identifying the Office Gap

John has office visit gap and already consented to follow-up contacts; it is detected by the Phytel Population Health Management solution.

John receives an automated call on behalf of the physician’s office, but does not make an appointment.
Identifying the Medication Gap

Medication gap is identified through CVS Health Engagement Engine

CVS Health & the Phytel Population Health Management solution connected messaging triggers a new engagement
Managing the Gaps

CVS Call center reaches out to John who has previously consented to follow-up contacts from CVS to:

- Reiterate the importance of making his doctor’s appointment
- Offer help to process his medication refills
- Connect John with his provider for an appointment
Dr. Williams’ staff uses the Phytel Population Health Management solution to prepare for John’s appointment.

The staff sees that John is overdue for his follow up appointment and lab results, and is not adhering to medication.

Having this information in one place potentially means:

- **Increased workflow efficiency for the clinician**
- **Dr. Williams has greater visibility into the patient**
Closing the Medication Gap

During John’s appointment, Dr. Williams counsels him on the importance of taking his medications as prescribed and explains the risks associated with missing doses.

Together, they create a plan to help John take better care of himself.
Closing the Medication Gap

John’s prescription is filled and waiting to be picked up.

Prescription fulfillment closes the medication gap.
John’s Journey:
Potential Scenario #2

This is a hypothetical case study using fictitious medical information and does not represent an actual medical case. The case study is intended to illustrate potential capabilities of this future solution. Actual features and capabilities may differ.
Identifying the Office Gap

The office gap message on the bag alerts John to call his primary care physician. John has already consented to follow-up contacts from CVS.

The patient screen alerts the pharmacist to talk with John about his office gap and encourages him to call his physician.
Managing the Office Gap

Following his CVS visit, John receives an email from his physician reminding him to schedule a visit.
Closing the Office Gap

Dr. Williams’ staff uses the Phytel Population Health Management solution to prepare for John’s appointment.

The staff sees that John is overdue for his follow up appointment and lab results, and is not adhering to medication.

Having this information in one place potentially means:

- **Increased workflow efficiency for the clinician**
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Looking to the Future
Using Cognitive Technology with the Goal of Identifying a Potential Healthcare Decline

In addition to care and medication gaps, Dr. Williams receives an alert for a potential health decline for John.

Analytics predict that John is likely to utilize health care facilities more than once within the next year.
Creating Potential Pathways with the Goal of Managing John’s Health Decline

Based on this information, the Phytel Population Health Management solution then recommends the following actions:

- Close John’s test gaps, including making an office appointment
- Review John’s medication interactions
- Assign a care manager for John
Learning from Patients’ Behavior

Using a cognitive approach with the goal of having the system continuously learn the behavior of the target population, and tailor engagements, is key.
Delivering the Right Communications

Analysis to learn the behavior of target population shows that the response of patients similar to John to live calls is greater than the response to automatic telephonic messages and email. The best way to reach John is suggested to be a live call by a care manager.

John’s response is registered to the historical data to help learning dynamic patient behavior.
Potential Pathways Forward for Population Health Management

Population health solutions could potentially be optimized for use across a wide range of chronic conditions with the goal of focusing on:

- Helping to predict individuals at risk for declining health
- Encouraging patients to adopt safe and healthy behaviors
- Suggesting appropriate use of cost-effective primary care and out-patient providers
Conclusion: Realizing Future Opportunities for Population Health Management

The growth in health data and the increasing connectedness of people has presented the population health management industry with an opportunity to transform people’s lives.
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