



## Overview

### The need

Prevea Health needed an infrastructure to help its physician practices automate population health management and patient engagement

### The solution

Prevea installed a suite of IBM Watson Health solutions designed to help them manage their populations

### The benefit

Prevea Health achieved a 250 percent improvement in care management efficiency; increased patients receiving preventive and indicated care; increased office visits by 207 percent for noncompliant diabetics; increased office visits by 124 percent for IBM Watson Health contacted hypertension and diabetes patients; and improved FFS revenue while transitioning to value-based care



## Prevea Health

### Prevea Health automates population health management

Prevea Health's 180 physicians deliver primary care and specialty care in more than 50 specialties at 20 health centers throughout Green Bay and northeast Wisconsin. The physician group launched its first patient-centered medical home (PCMH) in 2009 and now has patientcentered medical homes in 15 primary care sites that include 50 providers and 17 care managers who care for 29,000 patients.



## The challenge of managing populations in the practice setting

After adopting the patient-centered medical home care delivery model to improve the health and satisfaction of patients, Prevea Health needed an infrastructure to help its physician practices automate population health management and patient engagement. The multispecialty physician group found the solution it needed in IBM Watson Health.

Prevea's leaders committed early to the transition to value-based care, determined to move away from episodic care and embrace population health management. In 2007, before creating its first medical home, Prevea launched a progressive patient outreach initiative to identify gaps in recommended care and engage at-risk patients to receive necessary services within its practices. Based on this and other work focused on managing its patient population, the group received National Committee on Quality Assurance (NCQA) recognition for its medical homes.

However, the ability of Prevea's practices to manage population health slowed when they attempted to expand the PCMH model. Their system simply did not scale. According to Ashok Rai, MD, Prevea Health's president and CEO, "We were doing a good job with patients we were seeing regularly, getting them in for checkups and providing chronic disease management. But it

was a difficult and daunting task to consistently reach out to patients across our community who did not come in routinely." Complicating the problem, care management processes were largely manual, automation was limited and registries were rudimentary. Prevea's care managers had to identify and engage both the sickest patients and those at-risk of developing complications – a difficult task, even with Prevea's electronic health record (EHR). In addition, the care teams needed to reach out to those patients with education, preventive care reminders, community resources, nutrition advice and wellness opportunities.

The organization looked at several solutions, many of which were limited to automating patient outreach calls. Prevea wanted technology that would do more to help it manage its populations.

**"We couldn't be happier. IBM Watson Health was genuinely committed to being our partner in this project and to make sure it was successful. They clearly have a handle on quality programs," says Ashok Rai, MD, President and CEO, Prevea Health.**

## An automated solution for patient engagement

When Prevea leaders discovered IBM Watson Health, they knew they had found what they needed—a suite of solutions designed to help them manage their populations. Moreover, IBM Watson Health's "prevalidation" status from NCQA meant that Prevea practices that used the solution would receive automatic credit toward NCQA's 2011 PCMH criteria. "We have great care managers but we needed to get the right tools in the hands of the right people to engage those patient populations in most need of our help," said Dr. Rai. "That's where IBM Watson Health comes in."

As an initial step, Prevea decided to implement IBM Watson Health's solution that uses customer-provided criteria (e.g., missed or overdue appointments, overdue medically necessary tests) to help health care providers to automate the process of identifying gaps in care and performing patient outreach.

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### Solution components

#### Software

- IBM® Phytel Coordinate
- IBM® Phytel Outreach
- IBM® Phytel Remind

The solution helps care managers to:

- Identify patients due for recommended care based on evidence-based guidelines
- Notify these patients through automated messaging
- Track patient response and monitor adherence

For Prevea, a significant strength of the IBM Watson Health solution was its ability to integrate smoothly with its Epic EHR. IBM Watson Health representatives sat down with Dr. Rai and members of the Prevea IT team to outline and establish the implementation and integration plan. IBM Watson Health delivered on its commitment of an efficient, straightforward implementation.

IBM Watson Health’s technology operationalized data from Epic by:

- Identifying the last scheduled appointment for patients with selected chronic conditions and looking ahead to see if they had a future appointment scheduled. If the patient did not have an appointment in a period of time recommended by evidence-based practice, the IBM Watson Health system generated automated outreach communication.
- Detecting clinical indicators that might necessitate follow-up visits – for example, HbA1C data for diabetic patients. This component facilitated effective and efficient outreach for preventive and chronic disease care.

Dr. Rai explained, “In a way, we were doing two things by using the Phytel platform. We were re-engaging a non-adherent patient population and also preventing upcoming adverse events by engaging patients who needed care earlier.”

“Using IBM Watson Health creates a win-win situation for me as a care manager and for my patients. It saves me time and gives me capabilities to reach out to more patients. It helps me to determine how my patients are doing with managing their chronic disease. Most importantly, patients don’t fall through the cracks like they might have in the past with our manual processes. Patients throughout our community get the continual follow-up they need.”

– Kim Schmeling, Care Manager, Prevea Health



## Outreach, reduced gaps in care and increased quality

Prevea staff quickly saw the positive impact of the IBM Watson Health implementation. According to Jody Weise, RN, Quality Initiatives Coordinator, Prevea knew almost immediately that the IBM Watson Health implementation was helping the practice achieve its patient engagement goals. “We had scheduled the Phytel system to send out outbound communications to patients at about 10 a.m. every day,” she said. “Our staff would begin to field calls from patients wanting to schedule appointments by about 11 a.m.” Virtually any uncertainty staff had harbored about being more aggressive in their outreach disappeared when they began seeing patients who hadn’t come into the practice in years. The group’s outreach efforts have increased the number of patients receiving care.

Prevea documented the effect of this patient outreach on the quality of patient care, and the results were published in a peer-reviewed study in the *Journal of Population Health Management*.<sup>1</sup> The research showed that use of the IBM Watson Health automated patient identification and proactive outreach based on customer-provided treatment guidelines can deliver 2-3x higher adherence rates for both diabetes and hypertension.

The study revealed that patients who were successfully communicated with visited their physicians at significantly higher rates than those

who were not part of the program. Depending on the protocol, contacted patients completed two to three times the number of visits recorded for noncontacted patients. Non-adherence dropped by nearly 50 percent over the six-month period.

Successfully contacted diabetes patients had the highest rate of success, with a visit rate 207 percent greater than that of those practices not using IBM Watson Health solutions. Among non-adherent patients who were successfully contacted, 40.6 percent visited their physician, versus only 13.2 percent of those not contacted.

Impressive results were seen with non-adherent high blood pressure (hypertension) patients as well. Forty-seven percent of contacted patients subsequently visited their physician, while only about 22 percent of noncontacted patients had a visit during the study period.

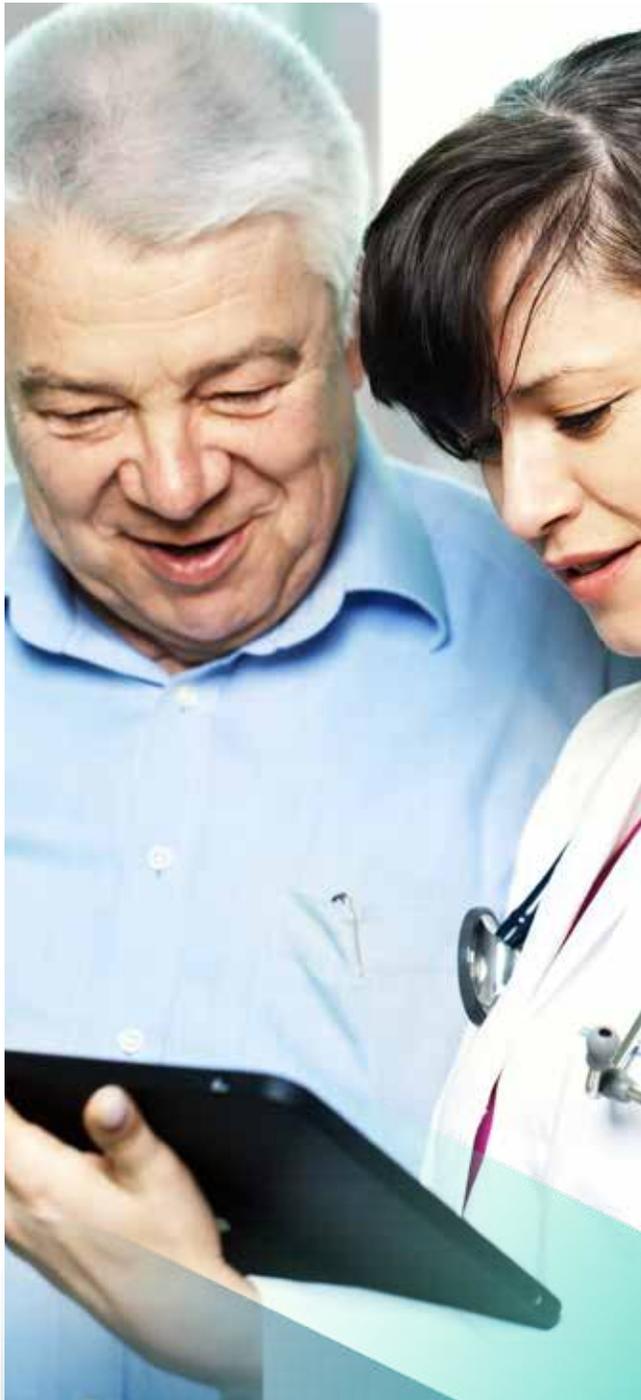
Combined results indicated that outreach efforts had a strong positive impact on non-adherent chronic patients in general. During the study period, the number of office visits for contacted patients—across both hypertension and diabetes protocols – was 124 percent higher than the rate of visits for non-contacted patients in the same categories. The study verified Prevea’s assumption that simply identifying patients with gaps in care is not enough. Without a means to effectively engage those patients, they will delay treatment or not seek treatment at all.

## The next phase: scaling care management

Encouraged by the results of its care coordination and patient engagement efforts, Prevea decided to roll out more of IBM Watson Health’s solution suite. Prevea’s leaders, clinicians and care managers now use the patientcentered registry for more advanced care interventions. With this datadriven insight, they are:

- Using risk stratification software to identify patients whose care falls outside established guidelines
- Designing online interventions for groups with low, medium and high health risks as part of their population health management strategy
- Generating pre-visit and post-visit reports to view care gaps for a patient before, during and after the visit so that staff prepare efficiently for patient encounters and better manage follow-up care

“In the past, we couldn’t easily access the information from our EHR to determine which patients needed care without spending hours generating reports that were outdated by the next day,” said Kim Schmeling, a senior Prevea care manager. “Our care management program started by focusing only on the high-risk patients who came into the practice. Now with IBM Watson Health, I don’t have to do the manual work of identifying which patients are at risk, or keeping track of when to contact them and how our last contact went. I know that the patient’s information is going to be real time data, and it’s going to be accurate.”



IBM Watson Health solution suite is also enabling Prevea to evaluate its own effectiveness at managing population health, including:

- Producing worklists to track and manage quality measures and initiatives
- Demonstrating quality improvements to qualify for Meaningful Use, payfor-performance and other incentives
- Assessing individual provider and practice performance on quality guidelines

“We can look at the big picture of our performance as a clinic as a whole, or we can drill down to the individual provider level,” Schmelting added. “Service-line directors can easily see which providers might need a little bit of help to manage a certain population. This helps us focus our resources where they’re needed most.”

Besides enabling easier identification of high-risk patients and streamlining the care management workflow, Prevea’s leaders also noted that the IBM Watson Health solution was helping them bridge the difficult transition between the traditional fee-for-service reimbursement model and value-based reimbursement based on overall population health. This transition often requires significant upfront investment before yielding any financial reward. By engaging patients to bring them in for recommended and preventive care, Prevea inadvertently increased fee-for-service revenue, while at the same time delivering care interventions to its patient population.

## Improving transitions of care

Another significant Prevea initiative is providing better follow-up care for at-risk patients discharged from acute or urgent care settings. The physician group has used the IBM Watson Health technology to smooth care transitions and help prevent 30-day readmissions. The solution performs an assessment to identify at-risk patients just discharged from the hospital. It then routes these patients to care managers for follow-up. Prevea can then dedicate the necessary post-discharge attention to high-risk patients.

Contacting these patients within 24-72 hours of discharge, care managers answer patients’ questions about post-discharge instructions. Patients and care managers also discuss what medications to take and when. And if a patient needs a follow-up appointment, the care manager can schedule it. This timely communication with high-risk patients helps ensure that the patient and each person on the care team has the information and coordination they need to achieve a positive health outcome.

## Blood pressure control program

In further proof of the power of IBM Watson Health's care management platform, Prevea is participating in a pilot of the American Medical Group Foundation (AMGF) to reduce the incidence of hypertension, a leading risk factor for heart disease, stroke, kidney failure, and diabetes complications. AMGF's Measure Up/Pressure Down® program has a goal of bringing 80 percent of patients with high blood pressure under control by 2016.

Using IBM Watson Health, Prevea has implemented a blood pressure control quality improvement program to help identify those patients with uncontrolled hypertension and encourage them to come in for a visit to discuss opportunities to better manage their condition. The results have been promising. In its first 60 days of operation in four pilot clinics, an average 97 percent of patients received routine blood pressure measurements.



HTN pilot applying increased patient engagement results at 60 days compared to baseline

Prevea Health's commitment to the PCMH model, combined with care management solutions delivered by IBM Watson Health, is making it possible for the physician group to manage the health of its patient populations and positioning itself for value-based reimbursement.

IBM Watson Health population management platform product distinctions support the ability of healthcare providers to:

- Focus on care management protocols
- Perform risk stratification
- Generate automated outreach
- Integrate with Epic
- Benchmark and track physician and practice performance
- Implement quality reporting capabilities
- Implement functionality to help improve care transitions



## Notes

<sup>1</sup> Ashok Rai, Paul Prichard, Richard Hodach, and Ted Courtemanche; Using Physician-Led Automated Communications to Improve Patient Health; Population Health Management; August 2011; 14(4): 175-180. doi:10.1089/pop.2010.0033, <http://online.liebertpub.com/doi/abs/10.1089/pop.2010.0033>

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## Solution components

IBM® Phytel Coordinate

IBM® Phytel Outreach

IBM® Phytel Remind

## Connect with us



## About IBM Watson Health

In April 2015, IBM launched IBM Watson Health and the Watson Health Cloud platform. The new unit will work with doctors, researchers and insurers to help them innovate by surfacing insights from the massive amount of personal health data being created and shared daily. The Watson Health Cloud can mask patient identities and allow for information to be shared and combined with a dynamic and constantly growing aggregated view of clinical, research and social health data.

For more information on IBM Watson Health, visit: [ibm.com/watsonhealth](http://ibm.com/watsonhealth).

