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Increased Clinical Revenues by 10% with Azure Powered Predictive Analytics

Case Study Healthcare





Customer Background

A leading physical therapy software provider started with one idea: a single platform to effectively manage the full rehab therapy cycle. They use the Intermountain Rehab Outcomes Management System (ROMS), a best-in-class physical therapy outcomes registry and leader in rehabilitation-focused quality improvement.

Almost two decades later, they are still focused on accelerating exceptional clinical and financial outcomes for PT, OT, and SLP organizations of all sizes. They are Inventors of the therapy specific EMR, rehabilitation experts, systems designers, and optimization junkies. Based in Portland and the surrounding area, they have over 70 physiotherapist clinics.



Challenges

They had an average of 11%-13% patients who missed their appointments per clinic – these were either patients who cancelled an appointment or simply didn't show up. As a result, they were seeing over \$3 million in lost revenue annually per clinic – and in some cases, as much as \$15 million. Aside from the business impact, the lost revenue led to reduced quality of care, loss in productivity, and impaired patient outcomes.

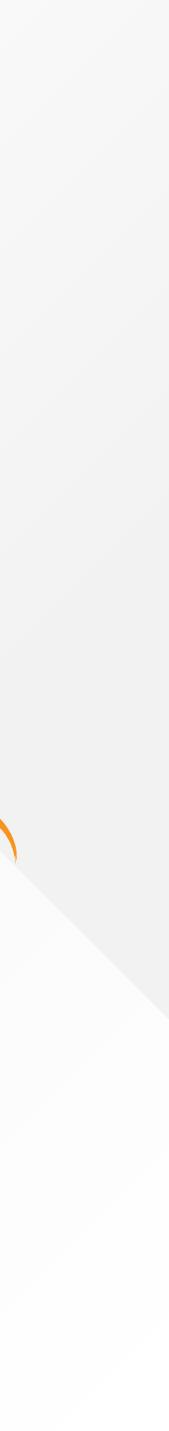
They were an advanced, committed Azure user and had worked with Microsoft's cloud for a couple of years now, so they knew the ecosystem, and the power of data. It was this familiarity that led them to begin experimenting and innovating. However, they needed a partner who could help take them beyond using cloud as an enabler of efficiency and IT infrastructure to one that would drive better patient outcomes. Apart from this, they wanted to implement predictive analytics, sales forecasting, patient personalization, things like this that leverage data to AI to drive patient understanding and unlock rapid business growth. This led them to contact Hanu.



Solutions

They took Azure cloud with Hanu's Machine Learning solution which predicts patient's missed appointments with 72% accuracy, improving patient outcomes while reducing one of the most significant sources of income loss in the medical industry and increases massive revenue.

⁴⁴ The team at Hanu are unlike any we have ever worked with. Rather than offer simple point solutions, they've become a partner who cares as much about our business and our patients as we do. As a result of the Microsoft data transformation and ML predictive capabilities they've helped us achieve, we've added millions to our top-line revenue and been acquired by industry leader. ⁹⁹





Key Milestones



Hanu began by trying to understand the patients' well enough to predict whether they will show up for an appointment or not. At a high level, it sounds like some sort of 'magic'. But they knew that they had an incredible amount of data at their disposal. From behavioral to financial to demographics, they had plenty of raw information to begin feeding Azure Cognitive Services.

After establishing the problem statement, the team at Hanu requested a sample set of data to begin creating the patient algorithm. Data included age, gender, medical history, current diagnoses and ailments, other demographics, and environmental data (i.e. weather, public transit, and Covid lockdown trends).

Milestone 2



Benefits

- Increased Revenue by 10%
- **Better Resource Utilization**
- Lower Operational Expenditure

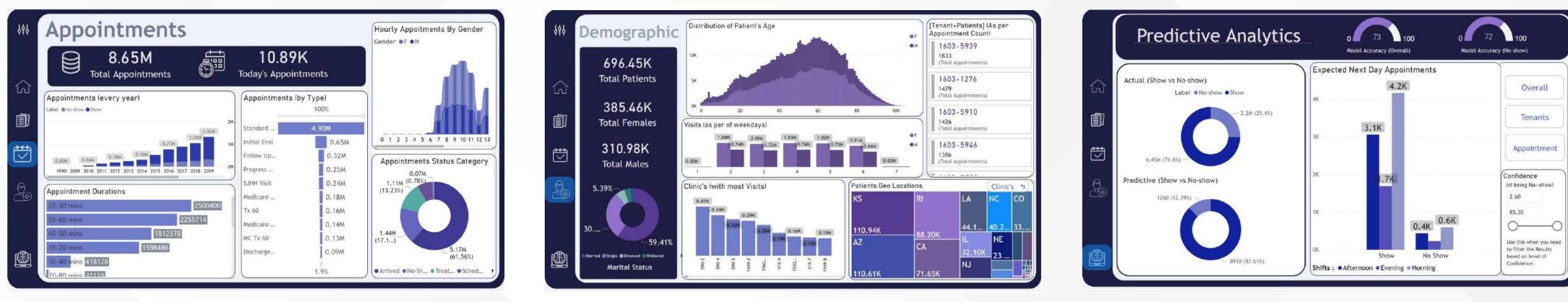
- Better Patient Tracking
- Better quality patient care



Hanu's entire solution of predictive model was built using the entire Azure Machine Learning tech stack. ML model scoring results are part of a smart MVP solution that optimizes clinics' appointment lists.



Appointments Analysis Report Example



At the beginning of 2022, they were acquired by industry leader. It is a much larger organization with IT architecture that can only be described as legacy, they had a small AWS footprint, with the rest of their IT infrastructure in on-premises servers.

With this acquisition, They realized the full benefit of Micros oft Azure. Now, the CTO is interested not only in keeping the c urrent work with Azure, but in creating an expanded roadmap to bring Azure Machine Learning and Predictive Analytics to all of their offerings. The next phase of the deployment will involve at-home care.

One of the things they found is that a client who consistently skips appointments will have more significant health issues as time goes on. Certain patients – such as the elderly or those with mobility issues – miss appointments more frequently – and they're usually the ones who need them the most. By building on the no-show prediction system, we can predict when these types of patients require at-home care and treat them appropriately.



An Insight company

- 12+ years on Azure with more than 800 engagements
- Microsoft Azure Expert Managed Service Provider and Cloud Solution Provider
- Microsoft India Partner of the year 2021 for Azure Technology and Microsoft US Partner of the Year 2020 for Azure Data Estate Modernization
- Recognized by reputed institutes like ISG and Gartner for Azure capabilities
- For more information, contact clear@hanu.com | www.hanu.com



