HEALTHCARE ANALYTICS CASE STUDY

ADVANCING PATIENT OUTCOMES WITH DATA-DRIVEN INSIGHTS ON SOCIAL DETERMINANTS OF HEALTH (SDOH)

Client: Public Sector
Industry: Healthcare
Location: United States
Project Duration: 36 months

BACKGROUND

The Public Health Department (PHD), a leading healthcare provider with multiple hospitals and clinics, has served the residents and visitors of the department, for nearly 100 years. The mission of the department is to promote physical, mental, and environmental health, prevent and protect against disease, injury, and disability.

CHALLENGES

PHD struggled to use collected demographic and socioeconomic data to address health disparities, limiting their ability to deliver effective, actionable solutions for both immediate and long-term community health issues.

OBJECTIVES

Enable Personalized Care
Identify disparities to implemented targeted treatments for better outcomes

Proactive Health Solutions
Anticipate and address health challenges with tailored healthcare interventions

Optimize Data Utilization
Provide tools to analyze social determinants and improve resource allocation.

COMPREHENSIVE DATA INTEGRATION SOLUTIONS

➕ Integrated historical patient data from legacy EHRs and documentation systems into a secure, compliant data warehouse, reducing costs and ensuring seamless access to clinical and SDOH insights.

➕ Previously manual, the process is now fully automated within the centralized warehouse, generating reports that provide seamless access to patient histories and insights.

Integrated, Real-Time Dashboards

➕ Provided actionable insights to healthcare providers in real-time for effective patient care.

➕ Transformed spreadsheets into interactive dashboards, enhancing accuracy, usability, and adaptability for administrators

Relational Data Graphs

➕ Connected various socioeconomic and health factors to reveal patterns and disparities.

➕ Allowed administrators to make data-driven decisions and target interventions effectively.

Secure Data Integration

➕ Utilized platforms like SAP HANA to centralize data while maintaining security.

➕ Ensured compliance with HITECH, HIPAA, and privacy regulations during integration of siloed data.
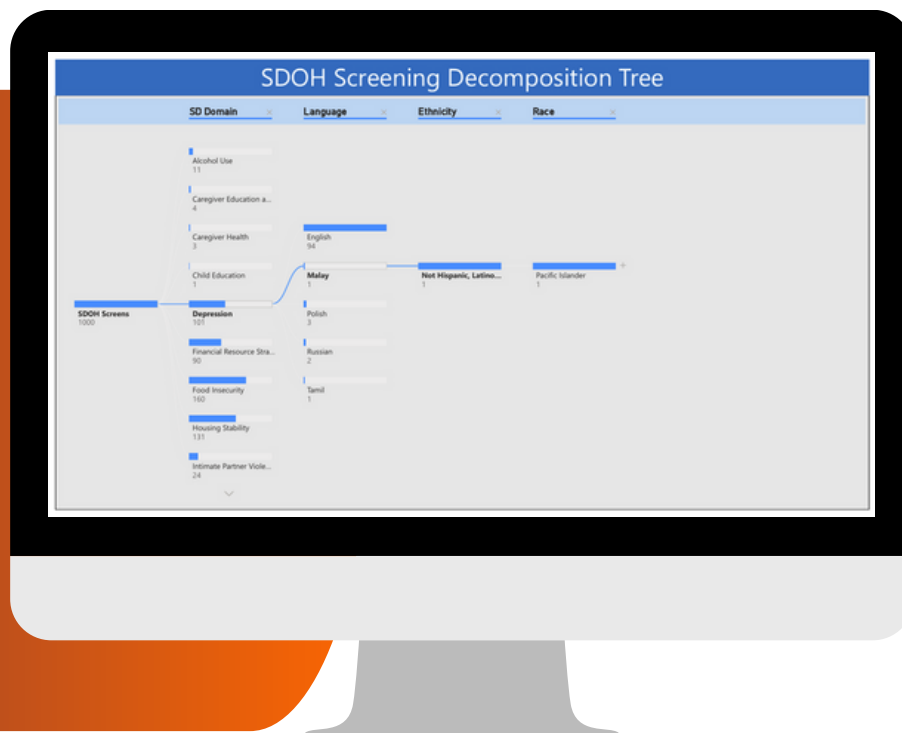
DATA SECURITY

HIPAA COMPLIANT

DECONSTRUCTING SDOH: UNCOVERING PATTERNS TO IMPROVE PATIENT CARE

Empowering hospital leaders with data-driven insights to analyze SDOH screenings, identify disparities, and refine interventions for improved patient outcomes.

SDOH Screening Decomposition Tree

IMPACT

IMPROVED POPULATION INSIGHTS

- Enabled a deeper understanding of how social determinants impact patient outcomes.
- Helped healthcare administrators identify high-risk groups for more targeted interventions.

PERSONALIZED TREATMENTS

- Allowed healthcare providers to implement tailored care and adjust medication dosages.
- Supported more precise and individualized healthcare, improving patient outcomes.

PROACTIVE DECISION-MAKING

- Empowered the department to respond effectively to relevant challenges faced on a daily basis.
- Enhanced readiness for large-scale health events like epidemics or pandemics.

CONCLUDING THOUGHTS

The partnership between V3iT and the Public Health Department shows how data analytics can transform how we address social determinants of health. By centralizing information and providing real-time insights, V3iT enabled healthcare providers to identify disparities and deliver more tailored care to vulnerable populations. This approach has promoted more equitable care and strengthens the department's ability to meet public health needs. As healthcare evolves, harnessing the power of data-driven insights will be crucial for shaping more responsive and effective care across the industry.

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