epiXact: Hospital-acquired infection (HAI) outbreak detection for health systems

- In Fall 2020, became technical and product lead for epiXact*, the company's first commercial offering

- Process:

  - Requested by email or on our website

  - Samples collected from patients suspected of HAI outbreak infection and sent to DZD

  - Sequencing => Analysis => Report

*in addition to MicrohmDB

epiXact: Key results

- Co-led Clinical Laboratory Improvement Amendments (CLIA) certification with Lab Director, which enabled epiXact to be ordered as a lab test

- Automated analysis and reporting to shorten turnaround time from ~1 week to less than 48 hours, which became an SLA we promised customers

  - Speed was critical for our customers because each day increased likelihood that more patients would be infected by an outbreak

- Updated design of our report for CLIA certification and also to improve CX/ UX

- Projects/ deals grew from ~1 per quarter to ~3-4 per quarter

epiXome: New product development

- Worked with our BD team, Marketing and CEO to develop new commercial offerings built on top of epiXact technology

- Part of the business challenge with epiXact is that it was "spiky", and we often struggled for customers to do regular/ repeat deals with us

- epiXome would be a continuous surveillance service for health systems to proactively detect and control for outbreaks

- I led the new product development process from concept/ design to launch

epiXome®

Unlocking the power of whole-genome sequencing (WGS) for proactive infection monitoring and control

- **Continuous, Scalable Surveillance** – Expansion of epiXact service from episodic investigations to automated, prospective sequencing for real-time monitoring of HAI transmission events.
- **Actionable Genomic Insights** – Leverage the precision of WGS to gain comprehensive, hospital-wide insights into the genomic epidemiology of bacterial infections.
- **Early Detection & Rapid Response** – Enable faster outbreak identification, data-driven infection control strategies, and sequencing-informed feedback to support microbiology lab quality management.
- **Cost-Efficient Infection Control** – Reduce the financial and clinical burden of HAIs through faster response to suspected transmission and prevention of large-scale outbreaks.

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