ADDRESSING $262B OF DENIED CLAIMS WITH AI ENABLED BY AMAZON SAGEMAKER

Alex Ermolaev, Director of AI, Change Healthcare
Who We Are:
Accelerating the transformation of healthcare through the Intelligent Healthcare Network™

- Independent, unbiased, & relentless drive towards better healthcare
- Tying our success to our customer: providers, payers and consumers
- Extensive product/services, expertise, data, and connectivity
- Delivering practical innovation through technology and partners

Pervasive across healthcare

Source: changehealthcare.com
Our Unique Combination

Industry-leading data for machines to learn ("First Mile")

Breadth and Depth of Data

Embedded into Workflow

Talent & Infrastructure

Already in the workflow across payers, health systems, providers and more ("Last Mile")

50+ data scientist team coupled with early adoption of AWS/Google/open source technology ("The Engine")
**AI Team Evolution**

**Crawl**
- Several data scientists spread across the company
- No leverage
- No visibility

**Walk**
- CEO/Board commitment
- Pipeline of projects

**Walk Faster**
- Rapid experimentation
- AI engineering
- One-click training and deployment

**Run**
Problem: Medical Claims

US Medical Claims: $3T per year

Claims Denied: $262B per year (9%)

Cost of Rework: $118 per claim

Total Loss: > $100B

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2. Source: Change Healthcare Internal Statistics
Imagine Knowing EVERYTHING About a Claim Before it’s Submitted

Providers can make changes before submitting, avoiding months of denial management.

Providers can optimize missing charges, liabilities, and audit risk, plus many other optimizations.

Payers can reduce administrative overhead by knowing the outcome of a claim.

Payers can analyze data to better understand cross-industry appropriateness of care.
AI Model Development Using AWS and SageMaker

Data Scientist

Notebooks

Amazon SageMaker

Training

Registry

Artifactory

Models

Scoring

Endpoints

AWS Lambda

API Gateway

App

Customers

Amazon S3

AWS Glue
Introducing Claims Lifecycle Artificial Intelligence

A service to help providers and payers manage their claim lifecycle using AI.

Uses insights from millions of transactions to train deep learning models.

Provides denial predictions, claim optimizations, and next-best-action.

Built on our Intelligent Healthcare Platform, leveraging enterprise API’s for real-time predictions.
Claims Lifecycle AI Initial Set of Capabilities

- **Likelihood of denial**
- **Likely denial reason**
- **Expected reimbursement**
- **Time to pay**
- **Line-level inference**
- **Human action advice**
Identified $6.2B in Forecasted Allowed Amounts Pre-submission

Source: Change Healthcare Internal Statistics
THANK YOU

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Visit us in the AWS demo pod or at the Change Healthcare booth #3679