SymphonyRM

AI NEXT BEST ACTIONS Vs. TRADITIONAL CRM

...RETROSPECTIVE ANALYSIS ACROSS 3 MILLION CONSUMERS.

CAN YOU AFFORD TO SKIP AI IN HEALTHCARE MARKETING?

HELLO HEALTHCARE!

WITH THE HYPE AROUND AI, WE WANTED TO PUT IT TO THE TEST AND SEE IF IT OUTPERFORMS THE CURRENT GOLD STANDARDS FOR DATA-DRIVEN MARKETING.

From Conventional Marketing to Data-Driven Propensities

Starting in 2009, Meaningful Use drove EMR proliferation in the past decade and helped fuel a boom in healthcare data acquisition. The newly available data gave rise to "Healthcare CRM."

The difference?

Old Approach: Mass Marketing (fig 1)

Targets everyone. Focusing all services to the entire market was costly, damaging to the brand, and hindered operations with unnecessary screenings for unlikely candidates.

2010s Approach: Traditional CRM (fig 2)

CRM vendors developed propensity models that helped guide marketing to consumers based on demographic characteristics or clinical history. (Example: Age, Job, and BMI to find ortho candidates)

CHALLENGES WITH TRADITIONAL CRMS REMAIN!

Though this era was a leap forward, serious challenges remain:

- **Failure to Reach At-Risk Consumers (Missed Opportunities/False Negatives):** Example – If a model targets consumers age 45 & up, people below 45 and have a clinical need are excluded!

- **Targeting the Wrong Consumers (False Positives):** Diminishes brand, costly to operations

- **Not Adapted Locally:** Models built on national datasets, not robust to local markets

- **Uncoordinated with Hospital Operations:** Without taking service line capacity into account, traditional CRMs help market services that operations can't deliver
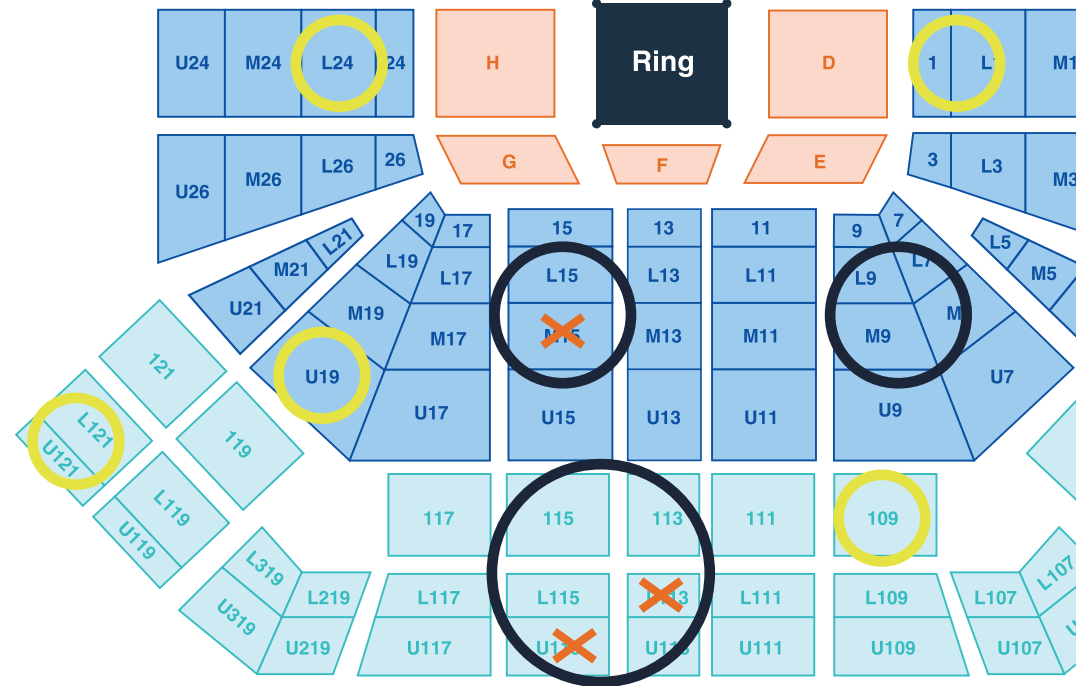

Fig 3

Legend:
- ○ Targets identified by Traditional CRM
- ✕ False Positives
- ○ Missed Opportunities

The Modern Approach: Use AI to observe millions of encounters and build Next Best Actions based on local consumer behaviors, demographics, and clinical context.

Traditional CRMs are bound to legacy infrastructure, so health systems are spending hundreds of thousands, or even millions, on the 2010s paradigm despite the challenges above.

Is this legacy approach costing our consumers and campaigns? To find out, we used data on more than 3 million consumers to compare traditional CRM approaches vs AI models.

MARKETING MODELS DUKE IT OUT!

CAN NEXT BEST ACTION AI BEAT TRADITIONAL CRM?

"The future is here! It's just not evenly distributed."

-WILLIAM GIBSON

There's no waiting, AI is already here. What it's good at is using encounter data, third party data, and many other sources to determine who to engage for which services and through which channels. This includes measuring operations and capacity to help suggest services that the health system is actually able to deliver.

Below, we'll compare how well AI performs against traditional modeling at finding candidates for bariatric surgery. Is AI worth all the hype that it's receiving?

BARIATRIC CAMPAIGN PERFORMANCE - NEXT BEST ACTION AI VS TRADITIONAL CRM

TRADITIONAL CRM:

Traditional CRMs follow a filter-driven approach, which we are able to replicate in our system.

For the bariatrics campaign, we selected patients with a BMI (body mass index) of at least 40 (kilograms per meter squared). It also included patients with a BMI of at least 35 and a past history of diabetes. Experts in our AI lab experimented with multiple queries & criteria, and this combination gave us the best results.

We wanted to provide the strongest baseline to compete against the AI. Even so, traditional approaches are hand selected. AI models update as they learn more from new encounters, but traditional approaches must be changed manually.

THE GOAL: FIND THE MODEL BEST SUITED TO REACH IDEAL TARGETS FOR A BARIATRICS CAMPAIGN.

WE COMPARED PERFORMANCE OF THE AI MODEL VERSUS A TYPICAL CRM QUERY, WHICH IS TO USE COMMON COMORBIDITIES AND BMI TO SELECT AN AUDIENCE.

AI NEXT BEST ACTIONS

AI learns by example. In this case, we tuned the AI to look at over 3 million patient records in order to have an extremely well-focused view of who is likely to use bariatric services and who isn't.

We trained the model to look at many relevant descriptors that are common in EMRs: BMI, past GERD (gastroesophageal reflux disease) diagnosis, sex, diastolic blood pressure, and many other factors. Models like these "learn" and become more accurate as more encounters occur.

The simplest way to think about how this works is a spreadsheet. Anything beyond a few rows and columns can get really confusing. AI easily looks at millions of rows and thousands of columns to tell who should receive bariatric communications.
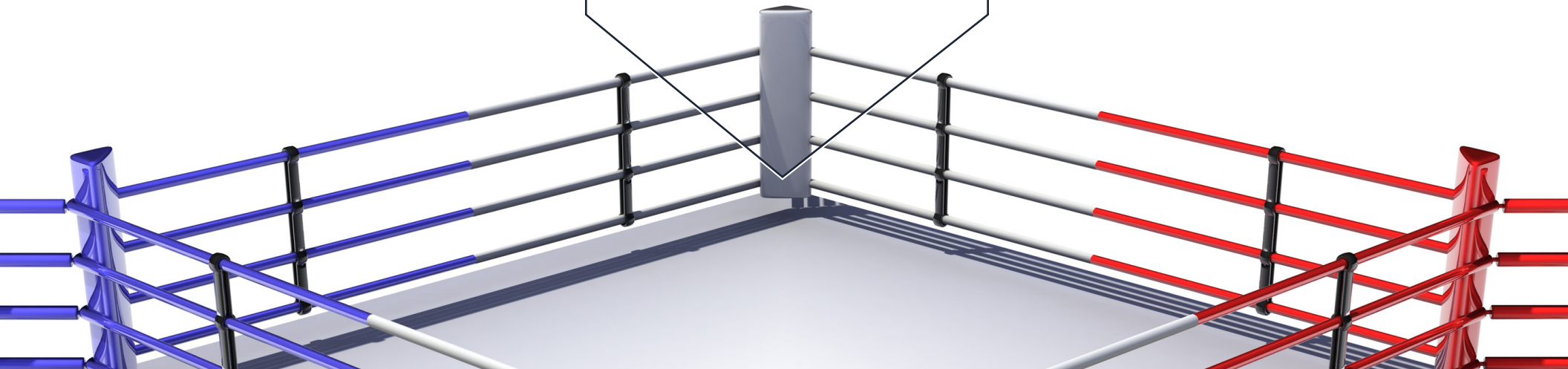
SUCCESS CRITERIA:

HOW WOULD WE KNOW WHICH MODEL PERFORMS BETTER?

To make sure the fight was clean and fair, we tested the model on the same set of 700,000 consumers. From those consumers, we wanted to see which model was better at identifying the people who had come in for bariatric surgery. The more patients the model could identify (True Positives), the better the performance.

Recall the "Missed Opportunities" shading from page two. In this case, these are people who had the surgery, **but the model failed to identify,** otherwise known as false negatives. Models that are high in false negatives exclude patients who have a true clinical need and miss revenue opportunities for the health system!

We'll look at how the models performed and compare the impact on revenue.

700,000 Consumers in the Study

Accurately Identify the Most Surgery Candidates
Minimize the Number of Patients in Need Missed

TECHNICAL TIP: To see how well your campaigns find True Positives (TP) & minimize False Negatives (FN) use:

Sensitivity= TP/(TP+FN)

THE RESULTS:
NEXT BEST ACTION AI MODELS **OUTPERFORMED** TRADITIONAL CRM!

13.3%
More True Positives
The AI model found significantly more bariatric screening & surgery recipients

28.2%
Fewer False Negatives
Traditional CRM approach missed a large number of valid candidates

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At about $20,000 per Bariatric Surgery...

$920,000 Additional Value

This is revenue that traditional CRM would have missed. Missing potential bariatric patients allows health problems such as joint pain and depression to proliferate in the community

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AI and distributed computing deploy thousands of better-performing propensity models in less time than a researcher can deploy one.

These models can enrich the data in other CRM or Marketing Automation systems, or they can be used with SymphonyRM's own HealthOS.

No matter the platform, the focus is on the science and intelligence to drive Next Best Actions that ensure you capture all the clinical need in your market.

SRM SymphonyRM

If you're interested in understanding how AI can help better outreach and engagement to your patients, reach us at **info@symphonyrm.com** or visit **symphonyrm.com** to learn more.