



Predictive analytics from HDMS: Use data to look ahead

The HDMS Enlight™ platform includes predictive models that help us look forward in areas like ER visits, admissions and costs.

Data runs through each predictive model. Results are stored and available for analysis as part of the connected health views. These powerful models provide deep insights used for:

- Strategic planning
- Managing high risks
- Managing emerging risks
- Working with partners to personalize care

How does it work?

HDMS processes client data through each predictive model. Users can analyze the results of a single model or look across multiple model outputs for even more powerful enlightenment.

Data visualizations in analytic pathways support interactive analysis and power users can configure custom views. With permissions, users may even drill down to explore de-identified member-level insights

HDMS can also securely feed this information to health partners for care management programs and other activation strategies.

What's behind today's predictive models?

Think of all the situations and human choices that could realistically lead to an event like an ER visit or an in-patient visit, based on what we know and what has happened in the past.

Predictive models, driven by artificial intelligence and machine learning techniques, are able to incorporate hundreds of variables and innumerable patterns. They represent the knowledge of thousands of doctors with infinite amounts of coffee, tracking detailed history across the entire country.

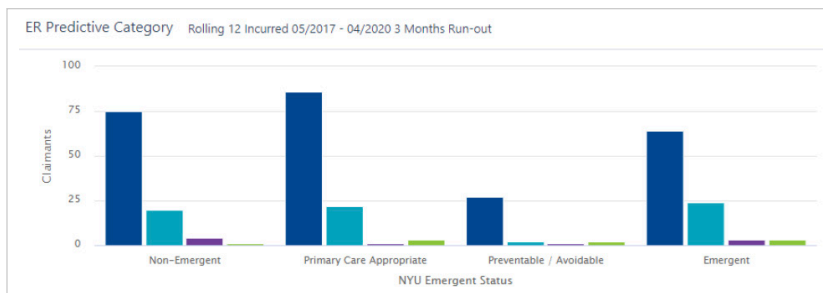
Models learn from huge training data sets rather than logic. We feed models (in training mode) massive data sets that contain real situations and human patterns. The models learn what to look for to successfully predict a similar outcome. They also extrapolate based on patterns and math.

Powerful analytics

Start simple

First we get our arms around a high-level view. We drop results into simple predictive categories: low, medium, high. This lets you quickly visualize how a population is distributed across the scoring possibilities

Just how big is that bucket of high scoring members – those likely to land in the ER or be an HCC? We see member counts for each category. These categories are defined yet configurable. Default category definitions can be refined with different scoring bands for your organization. These insights help us plan, budget, operate efficiently. But let's do more than that.



Member ID Encrypted	NYU Emergent Status	State	ER Visits	Probability
HHwFuFF9uF9	Emergent	IL	9	19.5%
	Primary Care Appropriate	IL	4	19.5%
	Non-Emergent	IL	3	19.5%
	Summary		16	19.5%
Z8cjXeZKkee	Emergent	IL	2	23.7%
	Unclassified ER/Urgent	IL	2	23.7%
	Primary Care Appropriate	IL	1	23.7%
	Injury	IL	1	23.7%
	Summary		6	23.7%
5c5X2XVq332	Unclassified ER/Urgent	IL	2	25.6%
	Non-Emergent	IL	1	25.6%
	Primary Care Appropriate	IL	1	25.6%
	Emergent	IL	1	25.6%
	Summary		5	25.6%

Dig deeper

Next we want to know more about our groups. Where are they? How old are they? What conditions do they have? Because predictive analytics are integrated into the connected health model in Enlight, we can design analytic views that let us further explore our populations by each group, for new questions we ask.



Build specific strategies for specific, targeted populations.

Action-oriented strategies.

Predictive models surface specific predicted outcomes based on data-derived facts, or the absence of data facts we want to see. This lets you define specific, targeted actions, and avoid or diffuse a negative event for a specific, known member

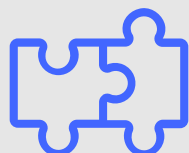
population. Sadly, there will always be members we can predict have a high likelihood for a poor health experience, like becoming a high-cost, claimant. We want to ensure those members are engaged in our best care and we are helping them at every step.

But aren't we already doing that? Predictive models help us find even more members most in need of these excellent options. It helps us connect them to the personalized care and nurturing relationships you've designed. And that's worth it.



Surface the rising risks

With our powerful data tools, the score itself is the output of the predictive model algorithm



Connect all the pieces

Produce specific, measurable populations that you can build specific strategies to address



Target specific data sets

Define specific, targeted actions, and avoid or diffuse potentially negative events



Surfacing the rising risks

Now is the time to act.

Predictive models produce specific, measurable populations that you can build specific strategies for. What do we start today, to intercept or disrupt a potential negative outcome?

Under the hood, each member receives a probability score. The score itself is the output of the predictive model algorithm. Just think of all the things you can do with probability scores!

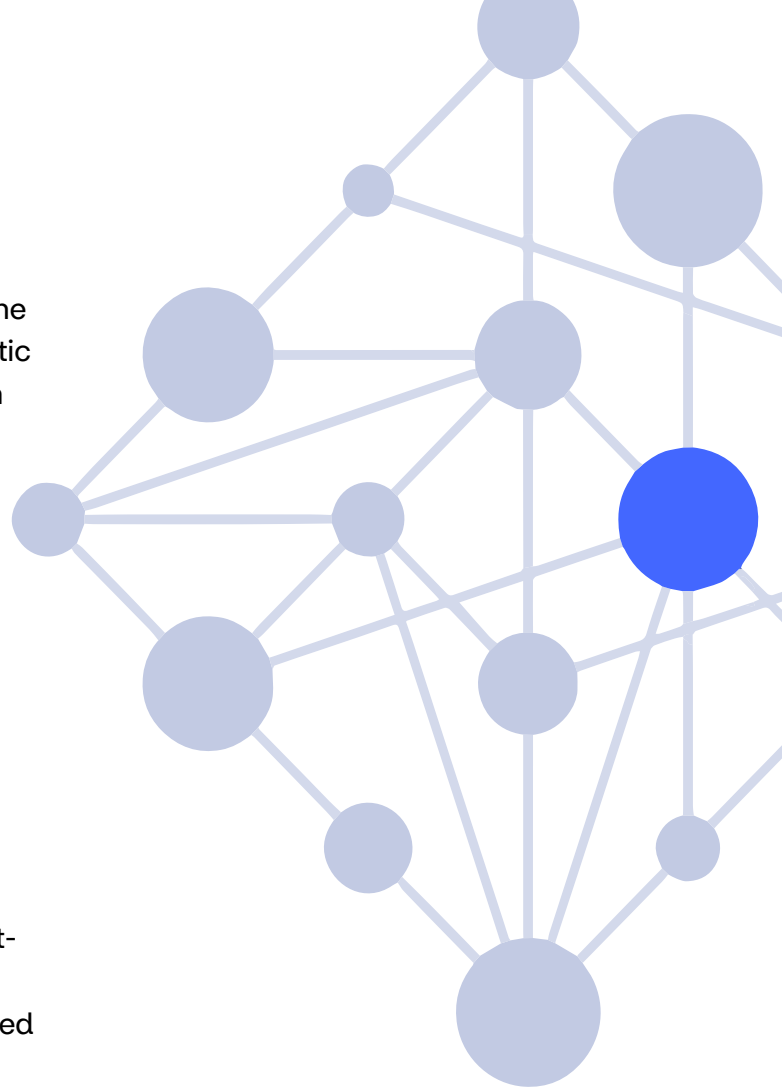
What next?

Next we want to know more about our groups. Where are they? How old are they? What conditions do they have? Because predictive analytics are integrated into the connected health model in Enlight, we can design analytic views that let us further explore our populations by each group, for new questions we ask.

We can isolate members by predictions — one or more models working together. For instance, we can:

- ▶ Supplement targeting strategies
- ▶ Alert care management teams
- ▶ Personalize outreach
- ▶ Improve cost and resource planning

HDMS predictive capabilities are designed to deliver out-of-the-box value with pre-built models and associated analytic views. Organizations ready for more sophisticated work are fueled with granular predictive model outputs, customizable views and access to member-level details. Ask us about tracking historical predictions.



About HDMS

Health Data & Management Solutions, Inc. (HDMS) is a trusted leader in health care analytics across the care continuum. The company transforms data into a high-value, decision-support asset for hundreds of health plan, employer, provider and broker customers. The company's solutions put unparalleled analytic power into the hands of customers, guiding them to make actionable and confident decisions to improve the health of their population. HDMS is a part of the CVS Health® family of companies. For more information, [visit www.hdms.com](http://www.hdms.com).

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