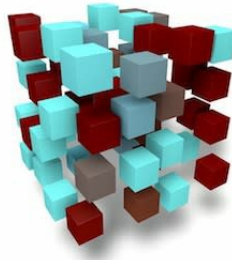## Data Tools Reduce Readmissions

Data tools can be utilised to improve care management. At Des Moines, Iowa-based UnityPoint Health, predictive analytics tools have been integrated into clinical workflows enabling the health system to achieve a 40 percent reduction in 30-day readmissions.

It helps that the organisation has a keen focus on promoting a culture that embraces the value of data. "We don't want to build models that sit on the shelf, or later realise no one is using them. We keep those people who use the tools top-of-mind, so we can build things that will actually help them drive results," said Rhiannon Harms, UnityPoint's executive director of strategic analytics.

The health system aims to take a more holistic and forward thinking view of readmission risk. This means looking at the whole care continuum, including the need to coordinate the follow-up care of the patient after leaving the hospital.

So instead of just calculating the overall risk for 30-day readmission, the analytics team at UnityPoint also tried to assess risk for every day along that 30-day post-discharge continuum.

"What we found is that some patients were at much greater risk of coming back early on after their stay, and then others tended to be more at risk later on in that 30-day timeline," said Ben Cleveland, data scientist at UnityPoint Health. "Maybe their problems would compound over time, or they would miss their follow-up appointments, or they wouldn't follow directions for medication."

The team developed a "risk heat map" over that 30-day timeline that visually depicts a patient's risk. "You don't have to be a data scientist to interpret the output you're looking at, you can look at it quickly," explained Cleveland. "For every patient we have they have their own individualised heat map that our care teams are working off of."

With this tool, care teams can easily see who's at high risk for readmission. But even more importantly, forearmed with the knowledge of where on that 30-day continuum they're most at risk, it helps them know when to schedule interventions in the "heat zones" most applicable to the patient.

Another innovation was a freestanding no-show appointment model, said Cleveland. This has been integrated into the tool so care teams can computed the no-show risk. "So you've identified their readmission risk over time, you've planned two follow-up appointments with their PCP – but it turns out they have a high risk of not showing up for those, so you have to augment your strategy a little more to ensure interventions actually happen," he added.

The health system also has a freestanding length-of-stay model that predicts how long a patient will be in the hospital, said Cleveland. This model is incorporated into the tool to help with discharge planning (i.e., resource allocation).

Careful attention to care teams and clinical staff – with clear instruction about how to use the tools and clear explanation of their value – has been important to the initiative's success, Cleveland noted.

Source:

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