

Matching Complex Patients with Case Management Programs



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Overview

To find high-risk patients who might benefit from additional health and social services, we have developed and implemented an artificial intelligence system to identify patients in need of enhanced care coordination in partnership with UW Health, one of Wisconsin's largest health systems. We are currently screening over 120,000 patients in Dane County each month using the system. In the upcoming year, we will extend this system across the southern half of Wisconsin in partnership with one of the state's largest health plans, screening an additional 166,000 patients each month.

The Clinical Problem

Case management programs in health systems are used to improve care coordination and reduce the use of high-cost services among patients with complex illness and multiple conditions. Typical case management activities pair the patient with a nurse or a social worker who helps to manage care transitions, assure timely follow up with primary care and specialist clinicians, and help navigate complex medication and appointment schedules and coordination.

Case management programs are widely used in many health systems, but evaluations rarely show any evidence of cost savings or effectiveness. This may be partly due to the lack of tools to select patients for the program who are most likely to benefit. Not all high-risk patients will benefit from enrollment in a case management program. Some are too sick, while some have conditions not amenable to management. The inability to identify patients who might benefit can lead to wasted time and resources for both patients and providers.

“Not every high-risk patient benefits from case management. We need some way to find those patients who are likely to benefit.”

- Case Manager

Our Response

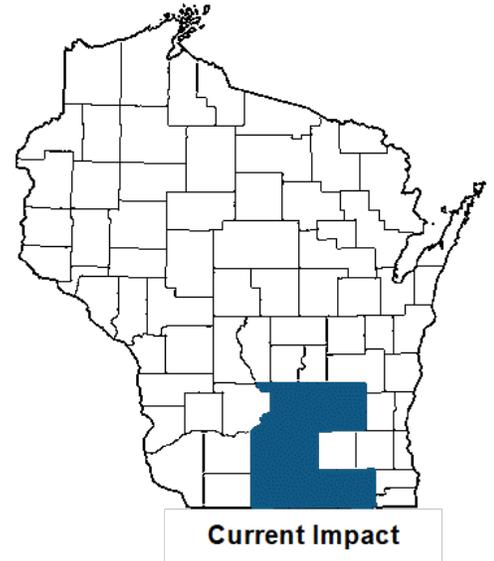
To find high-risk patients who are likely to benefit from additional health and social services, we have developed and implemented a scoring system based on artificial intelligence. The long-term goal of our scoring system is to improve the match between case management programs and the patients who are enrolled in them.

Results

High-risk patients identified by our scoring system showed significant cost-savings after enrollment in case management programs. This evaluation used a retrospective cohort study design with multiple before-and-after measures of the outcome for each case management patient and their matched comparison.

Lasting Impact

We are currently screening over 120,000 patients in Dane County each month using the scoring system in partnership with UW Health, one of the state's largest health systems. In the upcoming year, we will extend this system across the southern half of Wisconsin in partnership with one of the state's largest health plans, screening an additional 166,000 patients each month. We are actively working with other health systems and health plans to expand the use of our scoring system to other patient populations.



Resources

Toolkit

- ✓ [Case Management Benefit Scoring System Toolkit](#)