5 | RN-to-RN Teamwork and Collaboration

Froedtert nurses **Stephanie Wasechek,** BSN, RN, and **Myndii Kannenberg,** BSN, RN, review a patient's Rothman Index scores and plan for next steps with Rapid Response Team nurse **Martina Adams,** BS, RN, CCRN.
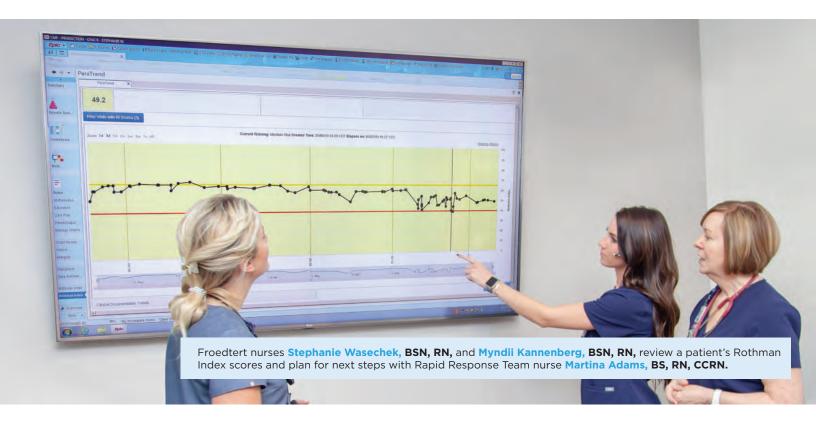
The Rothman Index

Froedtert & the Medical College of Wisconsin Froedtert Hospital registered nurses (RNs) pride themselves on working together as a team to provide high-quality nursing care. RN collaboration is readily seen when addressing changes in patient condition and utilizing the expertise of specialized nurses, such as the Rapid Response RN and Virtual Care Team RN. Some changes nurses observe and assess in their patients are subtle and can be early signs of a patient's health deteriorating. For the Froedtert & the Medical College of Wisconsin health network's inpatients, nurses have an added digital tool that can detect those subtle changes earlier, the Rothman Index.

The Rothman Index is an early warning system that helps a health care team predict a potential emergency and intervene before it happens. More than 700 data points from a patient's electronic health record (EHR) are plugged into an algorithm in real time — nursing assessments, laboratory values and vital signs drive predictive analytics to generate a visual dashboard. The dashboard helps clinicians identify early changes in patient condition, before these changes may be clinically apparent and early enough to prevent deterioration, allowing for proactive intervention. A warning is triggered to alert nurses and others on the health care team if there is a decline. This tool validates nurses' assessments and supports clinical decision-making.

Froedtert Hospital's implementation of the Rothman Index (RI) in 2018 has significantly enhanced RN-to-RN teamwork and collaboration.

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> **MYNDII KANNENBERG,**
> **BSN, RN, STAFF RN, 8CFAC**
> *Blood and Marrow Transplant/ Hematology Oncology*

As part of Froedtert's commitment to patient safety and improving patient outcomes, the RI is monitored 24/7 by the Virtual Care Team (VCT), part of Inception Health, the health network's innovation center. The VCT, composed of experienced critical care nurses, critical care physicians and advanced practice providers, acts as a safety net and an additional layer of support. When a change in patient condition triggers a Rothman Index warning, the VCT gets the alert, as does the patient's nurse, provider and other team members. A VCT nurse conducts a detailed review of the EHR and reaches out to the patient's nurse, if warranted, for further evaluation and discussion. They partner to decide on next steps and take action.

Another key member of the RN team, with specialized expertise, is the Rapid Response RN. Martina Adams, BS, RN, CCRN, Rapid Response RN, shared that "The Rapid Response Team provides critical care outreach for non-ICU patients. In addition to official Rapid Response Team calls for acute changes in a patient's condition, the Rapid Response Team RN rounds on all inpatient units, evaluating patients at risk for clinical decline. With implementation of the Rothman Index, the Rapid Response Team RN can review the EHR prior to rounding and view individual Rothman Index scores, prioritizing surveillance on patients with lower scores or high-risk warnings." The VCT RNs also reach out to Rapid Response Team (RRT) RNs to discuss high-risk patients or patients they think would benefit from RRT RN assessment.

Use of the RI and VCT has also extended to Radiology nurses in planning for inpatients scheduled for diagnostic exams and procedures. Radiology staff reviews the patient's RI score prior to arrival. For patients identified by the RI as high-risk, the Radiology RN communicates with the VCT RN and inpatient RN to develop a plan of care. The nurses discuss the patient's clinical presentation and identify the steps they will take to assure the patient is in Radiology for the shortest time possible. If the nurses are concerned the risk of leaving the patient care unit may be too great, the provider is contacted to weigh the risks/benefits and determine if the procedure should move forward or be deferred until later.

Myndii Kannenberg, BSN, RN, staff RN on 8CFAC, the Blood and Marrow Transplant/Hematology Oncology unit, summed up RN-to-RN teamwork and collaboration relative to RI best, noting, "We appreciate alerts from the Virtual Care Team RN when a patient's Rothman Index status changes because it enables us to immediately address the patient's needs. We assess the patient and call the Rapid Response Team, if indicated, which facilitates great collaboration, bringing an extra level of care to the bedside."

Integration of this early warning system has contributed to the increase in communication that drives the teamwork and collaboration. The VCT investigates an average of 82 RI warnings per day, followed by an average of 70 outreaches to nurses. A continuation of the current plan of care occurred with 53% of those instances. In 30% of the outreaches, the VCT confirmed the inpatient nurse was aware of the patient's clinical decline and interventions had been implemented. This demonstrates the astute assessment and critical thinking skills of inpatient nurses. Approximately 18% of the VCT outreaches resulted in a new action being taken, with the RRT activated in 2% of those situations.

"We're being proactive," said Rose Gaskell, BSN, RN, director of nursing special projects for Froedtert Hospital, one of the RI project leaders. "We're catching things earlier, providing better care to our patients by pre-empting critical situations. Our unique implementation of the RI has promoted an even higher level of RN-to-RN teamwork and collaboration." ■

Research has demonstrated the Rothman Index significantly reduces patient mortality. The National Patient Safety Agency reports that 11 percent of serious incidents are a result of deterioration not acted upon, and primary root causes include the failure to recognize the importance of clinical deterioration.

The Rothman Index, from PeraHealth™, involves analyzing more than 700 electronic health record data elements to serve as an early warning system. Those elements roll up to the 26 core variables of the Rothman Index. Every time one of those 700 data elements changes, it is computed in the algorithm and updated in real time into the index, providing a patient acuity score and generating warnings indicating the level of health risk for each patient. Nursing assessments comprise a critical portion of the data, with changes significantly impacting the RI scores and warning alerts. The index gives a stronger, more objective, data-driven "voice" to those who provide patient care and allows nurses, providers and other team members to proactively intervene, preventing additional risk to patients.