

# Implementing an Innovative Risk Assessment Tool in the ICU

## Introduction/Problem

With the support of the Gordon and Betty Moore Foundation an innovative risk assessment tool was developed in collaboration with ICU leaders at Beth Israel Deaconess Medical Center (BIDMC) and system engineers. The ICU Intensity Index (I3) is an application that predicts the risk of patient harm occurring in the ICU. A retrospective analysis of environmental factors, such as patient admission, transfer, and discharges within the ICU; level of nursing experience, and patient acuity, were used to understand the impact they collectively have on actual patient harms. This application has the potential to change how ICU workflow and resources are deployed in the ICU. (Stevens, 2017)

In designing the implementation phase of the I3 the team recognized that adoption of technological solutions, such as the I3, capable of supporting nursing practice and improving patient safety and outcomes, require early contribution and buy in from nurse end users.

## Aim/Goal

The aim of this study was to assess their beliefs and values regarding the I3 tool as an innovative risk assessment application. Focus groups were conducted with ICU Resource Nurses from all 7 ICUs at BIDMC, using a qualitative semi-structured interview guide. The data was used to inform the development of the I3 implementation plan.

## The Team

- Susan DeSanto – Madeya , RN; PhD
- Patricia Folcarelli RN; PhD
- Jane Foley , RN; MHA; DNPc
- Anna Johansson, PhD
- Jennifer Stevens , MD

## The Interventions

- 2 focus groups were conducted with 12 ICU Resource Nurses
- Focus group were facilitated by nurse researcher who had no reporting relationship with the Resource Nurses
- Focus Group questions were related to the following domains:
  - Role of resource nurses in mitigating risk for harm
  - Current tools and tactics used by resource nurse to assess safety
  - Reactions to an IT risk assessment application
  - Anticipated barriers to implementation of I3 as a decision aid in ICU

## Results/Progress to Date

Thematic Findings:

- Lack of trust and accuracy of the I3 tool and in the ability of the tool to capture the full range of factors influencing the risk/intensity/ level of the ICU.  
*“difficult for our documentation to show the accurate level of activity on the unit”*
- Nurses clinical experience and intuition are more reliable than electronically pulled data  
*“a gut feeling, like you just know something bad is going to happen”*
- Concerns that the tool would result in loss of control/autonomy in staffing decisions by the resource nurse  
*“so it’s nice to have a risk assessment tool when it is Red what are we going to do about it”*
- Concerns related to the changing landscape of critical care environment and initiative overload.  
*“It seems like every week there’s constantly new things, new initiatives”*
- Risk in an ICU is accepted as a normal work environment.  
*“ I don’t think of it as risk, just normal”*

## Lessons Learned

- Results of our qualitative analysis of the focus group data suggests that the ICU Resource Nurses at BIDMC question the value and usefulness of the I3 application, nor could they envision integrating this tool into their daily work flow.
- Furthermore, our analysis demonstrates that nursing autonomy and control in the ICU environment must be considered if implementation of new technology is to be successful.

## Next Steps

- Further investigation into the risk-accepting culture of critical care, including where this might threaten patient safety and increase nursing burn-out.
- Revision and re-evaluation of implementation strategy for I3.

