

# Acuity Based Staffing Module for New Graduate Registered Nurse Hires

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## Introduction and Background

In September 2013, NSMC began planning for the orientation of eight new graduate registered nurses. Based upon previous feedback it was determined that the orientation process should be restructured with significant consideration given to the method in which patient assignments were derived. Previously, a new graduate cared for one patient and over time progressed to a full load of five patients. However, just using numbers of patients leads to a wide variation in assigned work. This creates challenges for the nurse to complete the assigned work resulting in increased overtime and employee dissatisfaction. We investigated whether using a staff assignment module that was an extension of an acuity calculation software system, QuadraMed Acuity Plus, already in use in our organization could be a potential solution. QuadraMed Acuity Plus uses multiple patient factors to calculate acuity which in turn could be used to inform assignments that are based upon a patient's workload and geographic location.

## Method

QuadraMed Acuity Plus uses an objective classification process to quantify patient care needs for the next 8 hour shift. Because the acuity score would now impact staffing, it was determined there was a need to validate the accuracy of the data before going live with the staff assignment module. A target goal was set to insure an accuracy rate of 90% for the indicator selection for each nurse assigned to a given patient. It was decided to start working one-on-one with the nurses. This was done on a daily basis with each nurse after the nurse had completed the daily classification in the acuity system on their assigned patients. Together, a member from the informatics team and the nurse would complete a blind monitoring of the patient's classification. This method helped to create an open non-confrontational dialogue for selecting the appropriate indicator and how this system could bring more value to their individual patient care.

## Results

Once the indicators proved to be accurate we used the data for that day as a test case to retrospectively calculate the recommended hours of work on a telemetry unit for staff to care for their patients over their eight hour shift. The actual patient load for the eight nurses ranged from 5.21 hours of work to 10.16 hours of work for their eight hour shift. This provided factual evidence that the previous method of assigning patients had significant variation and could be improved.

The acuity based staff assignment module went live and was used to create the patient assignments. The data in Table 1 is an actual day of staffing from the telemetry unit post implementation. Two of the nurses are preceptors to new graduate hires. On this day one team had a higher weighted assignment (RN4) in comparison to the other RNs, because they requested to have a patient from the previous day for continuity of care. The data also demonstrate that the other new grad team did have less Recommended Hours than the other RNs(Preceptor1). With the noted exception, the assignments shown in Table 1 have fairly balanced assignments.

**Table 1** Actual Nursing Assignment After Staffing Module Implementation

RN1	RN2	RN3	RN4	RN5	Preceptor1	Preceptor2
Rec 5.97	Rec 6.26	Rec 6.26	Rec 7.39	Rec 5.83	Rec 4.83	Rec 6.83
W11.1	W11.1	W11.1	W11.3	W11.1	W10.9	W11.2
Complexity Units 4.2	Complexity Units 3.6	Complexity Units 3.8	Complexity Units 5.1	Complexity Units 5.2	Complexity Units 2.8	Complexity Units 4.8

## Discussion/Conclusion

Although the pilot was geared towards the new graduate hires, the benefits of a more even workload impacted all of the nurses. While there has been initial success with the staffing module on the telemetry unit, we plan to continue to monitor the scores and results to see if the value of the staffing system continues over time. The overall consensus by most is this program, which was initially thought to be extra work with little to no benefit for the nursing staff, is now seen as a tool which positively impacts each individual's workload for a given shift.

## Reference

1. Graf, C. M., Millar, S., Feilteau, C., Coakley, P., Erikson, J. I. (2003) Patients' Needs for Nursing Care: Beyond Staffing Ratios. *Journal of Nursing Administration*, 33 (2), 76-81.