Exemplary Professional Practice: Staffing Scheduling and Budgeting Processes

**EP9** Nurses are involved in staffing and scheduling based on established guidelines, such as ANA’s Principles for Nurse Staffing, to ensure that RN assignment meet the needs of the patient population.

**EP9a:** Provide a description, with supporting evidence, when input from clinical nurses was used to modify RN staffing assignments and/or adjust the schedule to compensate for a change in patient acuity, patient population, resource or redesign of care.

**Introduction**

Adult oncology patients requiring inpatient admission to Massachusetts General Hospital (MGH) are primarily cared for on one of two oncology units, the Hematology/Oncology Unit (Lunder 9) or Hematology/Oncology/Bone Marrow Transplant Unit (Lunder 10). Both units are 32-bed, medical oncology units that provide complex multi-modality oncology care, including chemotherapy regimens, targeted therapy, radiation therapy, biotherapy, proton therapy, and palliative care. Patient care includes medical management related to the disease and treatment, treatment of side effects/complications, pain management, patient/family education, emotional and spiritual support, and integrative complementary therapies such as acupuncture, massage, art and music therapy.

Both Lunder 9 and Lunder 10 admit patients with lymphoma, sarcoma, and multiple myeloma. Historically, oncology patients with solid tumors were admitted to Lunder 9 while those requiring bone marrow or peripheral stem cell transplants, patients with a length of stay of up to 6-8 weeks, were admitted to Lunder 10. In 2016, Lunder 10 experienced an increase in patient volume. This increase resulted in the need to send these patients to Lunder 9 for admission. Because this patient population had a higher acuity, Lunder 9 saw an increase in their unit’s patient acuity. Lunder 9 clinical nurses, Lisette Packer, RN, BSN, and Kelly Mullane, RN, BSN, RN-BC, noticed this increase in acuity, raised their observations with their Nursing Director, Barbara Cashavelly, RN, AOCN, and led the way in adjusting the RN staffing schedule to accommodate the change in patient population.

At MGH, decisions about clinical nurse staffing and scheduling occur at the unit level and involve input from the clinical nurses directly providing patient care. The Nursing & Patient Care Services Direct Care Staffing Guidelines states the following:

> “Day-to-day and shift-to-shift staffing decisions are made by the Nursing Directors, Clinical Nurse Managers and/or unit-based registered nurses. Staffing decisions and patient care assignments are based on multiple factors including but not limited to current volume, patient turnover and projected admissions/discharges, patient acuity as measured by the patient acuity tool – and staff requirements – skill and experience levels, environmental factors, work schedules and availability, minimum
staffing requirements and reasonableness. In the event that additional staff are needed for a particular shift, there are multiple options available to the Nursing Director, Clinical Nurse Manager and/or unit-based registered nurse:

- negotiating changes in scheduled time among the unit staff
- utilizing staff from the Central Resource Team (CRT) for temporary fluctuations in unit workload
- accessing per diem shifts, straight time hours beyond standard hours or overtime hours by unit staff

The dynamic patient care environment requires flexibility to provide staffing based on patient need. Decisions about flexing up and down are based on the unit’s workload and the need to ensure that the staffing meets current and anticipated patient care needs, that the appropriate mix of staff is available, and that minimum staffing requirements (that is, at least two registered nurses, regardless of the patient census) are met.”

These guidelines supported the scheduling work of Lunder 9 clinical nurses as they experienced an increase in patient acuity.

Clinical Nurse Input on Schedule Adjustment

On October 12, 2016, Packer and Mullane, who serve as resource nurses and time planners for Lunder 9, raised concerns regarding the increased clinical needs of patients during their biweekly meeting with Cashavelly to review current and future staffing numbers. As a Nursing Director, Cashavelly receives a weekly productivity report for Lunder 9 which includes actual versus budget acuity tracking for a weekly, monthly, and year-to-date perspective. As such, she was not surprised when Packer and Mullane voiced their concerns that there was an increase in patient acuity on Lunder 9 over recent months and that there may have to be an adjustment to the upcoming clinical nurse schedule to compensate for this change in patient acuity.

Lunder 9 Patient Acuity

At MGH, patient acuity is measured by the Quadramed AcuityPlus™ Productivity, Benchmarking, and Outcomes System - Inpatient Methodology tool (AcuityPlus). The AcuityPlus tool is used to measure nursing workload or the required nursing care needs of the patient when budgeting direct care staff for the 40 MGH inpatient units. This patient acuity data, when combined with the expected volume for a nursing unit, predicts the number of direct care RNs and Non-RN Full Time Equivalents (FTEs) required for the expected nursing workload. When the actual nursing workload experienced on a unit significantly exceeds the budgeted workload, additional direct care staffing resources are required to meet this demand, and MGH nurse leaders advocate for the allocation of additional staffing resources.
To validate the increase in patient acuity identified by Packer and Mullane, Cashavelly requested a review of patient acuity on Lunder 9 between June and September 2016 in order to assess the trend in patient acuity for this specified time period. A review of the acuity data showed an increase from 2.02 to 2.29 between June and September 2016, a 13.3% increase (attachment EP9a.a). The increase in acuity was attributed to an overflow of Lunder 10 bone marrow and leukemia patients being admitted to Lunder 9. In addition, the implementation of a new clinical trial on Lunder 9, the Car-T Cell therapy, whose side effects caused patients to have acute neurological changes and delirium, required more nursing care and 1:1 patient observers.

**Clinical Nurse Staffing Recommendations**

The concerns raised by Packer and Mullane during their meeting with Cashavelly, along with the confirmation of the increase in acuity, was echoed by staff during the Lunder 9 staff meeting on October 19, 2016 (attachment EP9a.b). Staff agreed that the patient acuity was higher with the overflow of bone marrow transplant (BMT) and leukemia patients from Lunder 10 now coming to Lunder 9 since the end of July 2016. Cashavelly shared the recommendations from Packer and Mullane which suggested increasing staffing numbers on all shifts starting with the November 13, 2016 schedule. A new model for Resource RNs on the night shift would be implemented as well. The goal was for night Resource RNs to take 1-2 less acute patients to allow time to manage patient flow and support other staff with the more acute patients. Cashavelly informed staff that the increased staffing would put the unit over budget but that this action was supported by Debra Burke, RN, DNP, MBA, NEA-BC, Associate Chief Nurse, Oncology, Pediatric, Women's Health & Community Nursing Services upon review of the increased acuity trend.

The recommended adjustment to the RN staffing schedule starting with the November 13, 2016 timeplan was as follows:

<table>
<thead>
<tr>
<th>Shift</th>
<th>Range of RN staffing pre-November 13, 2016</th>
<th>Recommended RN staffing effective November 13, 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days 7a-3p</td>
<td>14-15</td>
<td>16</td>
</tr>
<tr>
<td>Evenings 3p-7p</td>
<td>12-13</td>
<td>14</td>
</tr>
<tr>
<td>Evenings 7p-11p</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Nights 11p-7a</td>
<td>10</td>
<td>11</td>
</tr>
</tbody>
</table>

Schedules are initially established for a time plan, but per the referenced direct care guidelines, unit staff are able to adjust RN staffing numbers as needed to accommodate for changes in patient acuity. The schedules in attachment EP9a.c reflect the increase in RN staffing numbers between June 2016 and May 2017. These documents reflect the actual daily schedules which may differ from the planned schedules as they have incorporated adjustments for patient acuity, census, flexible scheduling and benefit time.
Verification of Successful Staff Schedule Adjustments

At the staff meeting November 22, 2016 (attachment EP9a.d), staff indicated that the increase in staffing numbers improved their availability to provide clinical care to the more acute patients. In line with the direct care staffing guidelines, the Lunder 9 clinical nurses further inquired if it would be possible to “flex up” to 17 nurses on the day shift should patient acuity warrant. The next schedule being created would increase RN staffing to 17 at 11am with the flexibility of adjusting staff based on clinical needs of patients each shift. Similar positive feedback was given at the night staff meeting on December 1, 2016 that the new RN model of staffing 11 nurses at night has allowed the Resource RN availability to assist with the more acute patients. Having the ability to increase RN staffing to 17 if patient acuity warrants allows staff to provide one-to-one clinical care when necessary for the very acute Car T-Cell patients.

Packer and Mullane emailed Cashavelly in March 2017 confirming the adjustment to the nurse staffing schedule over the past few months had proved to support the clinical nurses in meeting the needs of the their patients (attachment EP9a.e). With the support of Burke, Cashavelly was able hire beyond her budgeted RNs for fiscal year 2017 in order to accommodate for the increase in patient acuity seen on Lunder 9. Further increased RN staffing is anticipated to be budgeted for fiscal year 2018.