

Nurse Staffing Hours Indicator

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Introduction

Nursing staff is the largest portion of the healthcare workforce and often provide the greatest amount of direct care to patients. As primary care givers, nursing staff are well positioned to improve patient safety and enhance care quality. Nursing staff is comprised of registered nurses (RN), licensed practical/vocational nurses (LPN/LVN) as well as unlicensed assistive personnel (UAP) such as orderlies and certified nursing assistants.

The NHSN Nurse Staffing Indicator, Nursing Hours per Patient Day (NHPPD) has been developed to provide facilities with a tool to assess the value nursing staff provides around patient safety and care quality. The NHSN NHPPD is based on two National Quality Forum (NQF) measures:

- #0204 – *Skill mix (Registered Nurse [RN], Licensed Vocational/Practical Nurse [LVN/LPN], unlicensed assistive personnel [UAP], and contract)*
- #0205 – *Nursing Hours per Patient Day.*

These measures are stewarded by the American Nurses Association (ANA) and collected as one of the National Database of Nursing Quality Indicators® (NDNQI®) by Press Ganey³.

The NHSN NHPPD includes the number of hours worked by RNs, LPN/LVNs and UAPs who provide direct patient care to patients in critical care units/locations. Using a nurse sensitive metric such as the NHPPD in conjunction with HAI metrics may inform decision makers in their efforts to improve patient safety and care quality for patients. Additionally, facilities can use the indicator to stratify their NHSN data as well as to refine their infection prevention and control strategies.

Setting(s) and Patient Locations

The guidance included in this protocol applies to facility types that are eligible to use the Patient Safety Component, which include acute care and other short-term stay hospitals (for instance, general hospitals, critical access hospitals, oncology hospitals, military/VA hospitals). These facilities may report their nurse staffing hours from **all critical care units/locations** which are mapped to a corresponding NHSN CDC location using the guidance outlined in the Patient Safety Component Ch 15 found at https://www.cdc.gov/nhsn/pdfs/pscmanual/15locationsdescriptions_current.pdf. These units/locations are noted as location type critical care (locationType = CC).

Reporting Requirements

1. Nurse staffing hours can only be reported for critical care units/locations.
2. Reporting these data is optional.
3. For each calendar month, nurse staffing hours and patient days should be collected on the Monthly Survey webform within the application.
4. Monthly patient day counts reported for NHPPD must match those reported for Device-associated Surveillance for the same location. This means patient day counts reported on the Device-associated Denominator Summary webform must be the same as those reported on the Monthly Survey webform for a given unit/location.
 - If total patient day counts for critical care units/locations are reported as part of the facility's Monthly Reporting Plan (MRP) for one of the Device-associated Event Modules, such as Bloodstream Infection (CLABSI – Central line-associated bloodstream infection), the patient day counts entered on the Denominator Summary Data webform will auto-populate on the Monthly Survey webform.
5. Facilities choosing to report nursing hours will have the opportunity to enter these data manually or upload using the comma-separated values (.csv) option.
6. Nursing hours and patient days should be reported within 30 days of the end of each month for each critical care unit/location.

Definitions

Critical Care Unit/Location – Highest level of care, includes all types of intensive care units. A unit/location that is mapped as one of the NHSN designated critical care units (locCDC) and denoted with location type as critical care (locationType = **CC**). For example, *IN:ACUTE:CC:B* indicates Burn Critical Care Unit.

Direct Patient Care – Patient-focused activities performed by nursing staff who are assigned to a specific unit performing care on/for patients who are assigned to the same unit. These care activities also include tasks that are patient-related but occur away from the patient such as, but not limited to:

- Admission, transfer, discharge activities
- Post-discharge communication
- Care coordination
- Documentation time

- Medication administration
- Monitor patients during transport within hospital or to/from other facilities
- Nursing rounds
- Nursing treatments
- Patient communication
- Patient screening (such as, risk and assessment)
- Patient teaching
- Tele-ICU care/ Tele-critical care*³
- Treatment planning
- Triage

**Tele-ICU care/ Tele-critical care includes assessment, planning, intervention, and evaluation of patient outcomes of nursing care.*

Nursing Staff – Includes registered nurse (RN), licensed vocational/practical nurse (LVN/LPN), and unlicensed assistive personnel (UAP) employed by the facility and temporary staff who are not employed by the facility (contracted/agency staff).

Total Patient Days – The total number of patients in the unit per day during the calendar month. This is a count of the number of patients in a patient care location during a defined time period. This count can be determined electronically or manually by a daily count or, depending on the location type, weekly sampling. This count only includes patients present at the time the count is conducted and **DOES NOT** include patients who are admitted and discharged from the unit before or after the patient day count is performed. This count is typically conducted at midnight.

Patient day count process:

- Record the number of patients on the unit each day at a designated time, such as midnight.
- At the end of the month, sum the daily counts.

Total patient day counts for a critical care unit/location reporting NHPPD should match the patient day counts reported for the same location reporting Denominator Summary Data for one of the Device-associated Event Modules, such as, Bloodstream Infection (CLABSI – Central line-associated bloodstream infection).

Direct Patient Care Hours – The number of hours worked by nursing staff assigned to the critical care unit/location who have direct patient care responsibilities for greater than 50% of their assigned shift. These hours are sometimes referred to as Productive Hours. Direct patient care hours are direct patient care hours and reflect time actually worked, including overtime.

The following are NOT direct patient care hours:

- Budgeted/scheduled hours not worked
- Vacation, sick, and leave time
- Orientation, education, and committee time
- Time where no direct patient care is provided due to on-call status or due to call-offs related to unit closing /low census/no patients

Generally, orientation time is considered non-direct patient care but when nursing staff who are in orientation are considered part of the staffing plan AND their work hours are charged to the unit AND they would be replaced if they call in/out sick, then their direct patient care work hours should be considered direct patient care hours.

Nursing Staff	Description
<p>Licensed Vocational/Practical Nurse (LVN/LPN)</p>	<p>Licensed LPN/LVN assigned to a critical care unit/location and is included in the unit’s actual staffing on the day the direct patient care hours are counted.</p> <p>Include LPNs/LVNs:</p> <ul style="list-style-type: none"> • Who are counted in the critical care unit’s staffing plan for any given day of the reporting month • Who are replaced if they call in/out sick • Whose work hours are charged to the critical care unit’s cost center <p>Do not include hours worked by the following LPNs (Exclude):</p> <ul style="list-style-type: none"> • Whose primary responsibility is administrative in nature • Who are a part of a specialty team, a patient educator, or case manager who is not assigned to a specific unit
<p>Registered Nurse (RN)</p>	<p>Licensed RN assigned to a critical care unit/location and is included in the unit’s actual staffing on the day the direct patient care hours are counted.</p> <p>Include RNs:</p> <ul style="list-style-type: none"> • Who are counted in the critical care unit’s staffing plan for any given day of the reporting month • Who are replaced if they call in/out sick • Whose work hours are charged to the critical care unit’s cost center <p>Do not include hours worked by the following RNs (Exclude):</p> <ul style="list-style-type: none"> • Who are Advanced Practice RNs (APRNs) performing the role of an institutionally credentialed provider (specifically, licensed provider). Institutionally credentialed providers may include physicians, Certified Registered Nurse Anesthetist (CRNAs), midwives, nurse practitioners, or physician assistants. • Whose primary responsibility is administrative in nature • Who are a part of a specialty team, a patient educator, or case manager who is not assigned to a specific unit <p>NOTE: Charge nurses are included in the direct patient care hours total when they are part of the unit’s staffing plan for any given day of the reporting month AND they are replaced if they call in sick AND their work hours are charged to the unit’s cost center AND they provide direct patient care responsibilities for greater than 50% of their shift.</p>

<p>Unlicensed Assistive Personnel (UAP)</p>	<p>Individuals trained to function in an assistive role to nurses in the provision of patient care, as delegated by and under the supervision of the registered nurse*.</p> <p>Typical activities performed by UAPs on all units may include but are not limited to:</p> <ul style="list-style-type: none"> • Taking vital signs • Bathing, feeding, or dressing patients • Assisting patient with transfers, ambulation, or toileting <p>NOTE: In some states assistive nursing personnel may be licensed. For the purposes of this indicator, include these persons in the UAP category.</p> <p>Do not include hours worked by the following staff (Exclude):</p> <ul style="list-style-type: none"> • Unit secretaries, clerks, or schedulers • Monitor technicians • Therapy assistants • Orderlies or transportation staff whose sole responsibilities are to assist with transport of the stable patient to another phase of care (such as to another nursing unit or to a vehicle for transportation home) • Student nurses who are fulfilling educational requirements • Sitters who either are not employed by the facility or who are employed by the facility but are not providing typical UAP activities.
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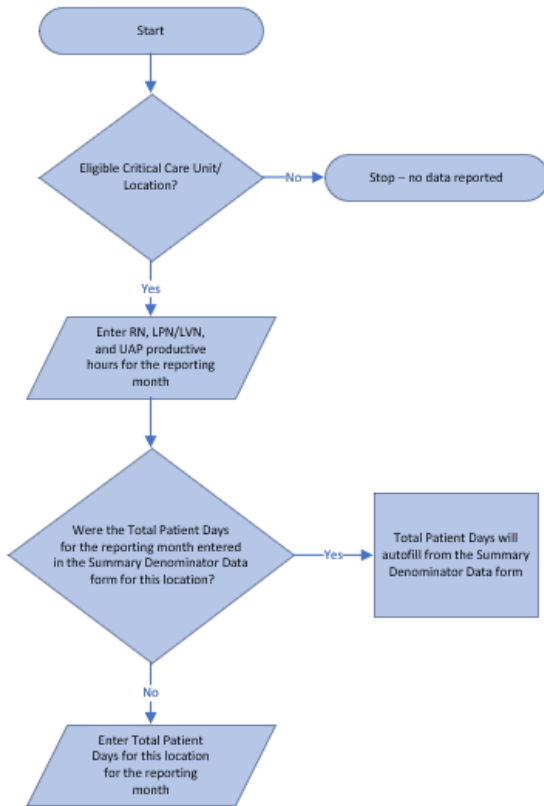
Measure Logic

All actual direct patient care/productive nursing hours worked by RN, LVN/LPN, and UAP assigned to the critical care unit/location should be included in the respective totals for each month. The direct patient care responsibilities must be for greater than 50% of shift.

- Direct patient care hours include overtime, not budgeted or scheduled hours. Vacation, sick time, orientation, education leave, or committee time should NOT be included in the direct patient care hours total. However, orientation programs vary from hospital to hospital.
- Float staff who are assigned to a unit other than their base unit of employment on an as-needed basis—must be counted and reported in the unit’s total nursing care hours where they provided direct patient care.

Total patient days is the count of the number of patients in each critical care unit/location for each month. This count can be determined electronically or manually by a daily count. Patient days should be collected at the same time, every day, for critical care unit/location reporting NHPPD – it is preferable that the count is performed at midnight/midnight census counts (the number of patients on the unit at midnight each day). At the end of the month, sum the daily counts/midnight census counts.

Measure Algorithm



File Description

The facility should manually enter or upload via .csv file separate total numbers of direct patient care/direct care staffing hours for RN, LVN/LPN, and UAP for each critical care unit/location. Additionally, the facility should manually enter or upload via .csv file separate total numbers of patient days for each critical care unit/location, if not included in the Device-associated Denominator Summary webform.

Data Analyses

Descriptive analysis of numerator and denominator data is available in the Reports Option of the NHSN application and includes rate table. Facilities entering data can perform analysis of these data at the facility, CDC location code, location, and location type level and over time can be used to monitor for trends and to track the impact of prevention strategies. Guides on using the NHSN analysis features are available on the Patient Safety Component Analysis Resources webpage found at <https://www.cdc.gov/nhsn/ps-analysis-resources/index.html>.

Additional characterization of nurse staffing based on aggregate data from Annual Facility Surveys may be conducted as the data collection becomes more robust.

Numerator:

Four separate numerators for each Critical Care Unit/Location as follows:

- **Total Nursing Staff** – Sum of the total direct patient care nursing hours worked by ALL nursing staff (RNs, LPN/LVN, and UAPs) with direct patient care responsibilities for each hospital in-patient unit during the calendar month.
- **RN hours** – Total direct patient care nursing hours worked by RNs with direct patient care responsibilities for each hospital in-patient unit during the calendar month.
- **LPN/LVN hours** – Total direct patient care nursing hours worked by LPNs/LVNs with direct patient care responsibilities for each hospital in-patient unit during the calendar month.
- **UAP hours** – Total direct patient care nursing hours worked by UAP with direct patient care responsibilities for each hospital in-patient unit during the calendar month.

Denominator:

- **Total number of patient days** for each critical care unit/location during the calendar month. Patient days must be from the same critical care unit/location in which the total number of RNs, LPL/LVN and UAPs hours are reported. Patient day counts reported for Device-associated Modules for the same critical care unit/location must match those reported for NHPPD.

Metrics:

- **Nursing Hours per Patient Days**

$$\text{ALL Nursing Staff Hours per Patient Days (NHPPD)} = \frac{\text{Total Number of Productive Hours Worked by ALL Nursing Staff}}{\text{Total Number of Patient Days}}$$

$$\text{RNs Hours per Patient Days (RN-HPPD)} = \frac{\text{Total Number of Productive Hours Worked by RNs}}{\text{Total Number of Patient Days}}$$

$$\text{LPNs/LVNs Hours per Patient Days (LPN/LVP-HPPD)} = \frac{\text{Total Number of Productive Hours Worked by LPNs/LVNs}}{\text{Total Number of Patient Days}}$$

$$\text{UAP Hours per Patient Days (UAP-HPPD)} = \frac{\text{Total Number of Productive Hours Worked by UAPs}}{\text{Total Number of Patient Days}}$$

- **Percent of productive nursing hours worked by RNs, LPNs/LVNs, and UAPs**

$$\text{Pct of total productive hrs. worked by RNs} = \frac{\text{Total Number of Productive Hours Worked by RNs}}{\text{Total Number of Productive Hours Worked by ALL Nursing Staff}} \times 100$$

$$\text{Pct of total productive hrs. worked by LPNs} = \frac{\text{Total Number of Productive Hours Worked by LPNs/LVNs}}{\text{Total Number of Productive Hours Worked by ALL Nursing Staff}} \times 100$$

$$\text{Pct of total productive hrs. worked by UAPs} = \frac{\text{Total Number of Productive Hours Worked by UAPs}}{\text{Total Number of Productive Hours Worked by ALL Nursing Staff}} \times 100$$

References

1. National Quality Forum. Measure #0204 - *Skill mix (Registered Nurse [RN], Licensed Vocational/Practical Nurse [LVN/LPN], unlicensed assistive personnel [UAP], and contract)*. Retrieved April 26, 2022, from <https://www.qualityforum.org/QPS/>
2. National Quality Forum. Measure #0205 - *Nursing Hours per Patient Day*. Retrieved April 26, 2022, from <https://www.qualityforum.org/QPS/>
3. Schlachta-Fairchild L, Elfrink V, Deickman A. Patient Safety, Telenursing, and Telehealth. In: Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Agency for Healthcare Research and Quality (US), Rockville (MD); 2008. PMID: 21328785