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# M E M O R A N D U M

**TO:**        Joint Fiscal Committee and Mental Health Oversight Committee

**FROM:**      Paul Dupre, Commissioner
               Department of Mental Health

**DATE:**      July 18, 2014

**RE:**        Staffing Plan for the Vermont Psychiatric Care Hospital (VPCH)
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Attached please find the July, 2014 report to the Joint Fiscal Committee and the Mental Health
Oversight Committee as outlined in **2014 Acts and Resolves No. 179**.

   I.   Act 179 Requirements
        1. Establish criteria by which to determine the appropriate staffing level at VPCH,
           considering the need to provide sufficient direct care and administrative and support
           staff consistent with the requirement to provide effective treatment services in an
           environment that monitors:
               a. patient care;
               b. safety needs of patients
               c. alignment with the guidelines of the federal Centers for Medicare and Medicaid
                  Services
        2. Justify and demonstrate need for each of the administrative and support staff included in
           the plan
        3. Identify, in consultation with the State's Chief Performance Officer, the desired
           outcomes, performance measures, and data requirements required to measure whether
           the hospital is achieving the stated outcomes for:
               a. patient care;
               b. effectiveness of treatment services;
               c. patient monitoring; and
               d. safety requirement

   II.  ATTACHMENTS A - F

Respectfully submitted by the Department of Mental Health

Please direct any inquiries for additional data collection or report content development to Paul Dupre,
Commissioner of the Department of Mental Health; paul.dupre@state.vt.us.

**Joint Fiscal Committee and Mental Health Oversight Committee**

**Department of Mental Health July 2014 Report**

**July 18, 2014**

This report provides information required by the 2014 Acts and Resolves No. 179. The questions are followed by both data and narrative explanation.

Act 179 Requirements pertaining to Criteria for Vermont Psychiatric Care Hospital (VPCH) staffing

1. **Establish criteria by which to determine the appropriate staffing level at VPCH, considering the need to provide sufficient direct care and administrative and support staff consistent with the requirement to provide effective treatment services in an environment that monitors:**
   a. **patient care;**
   b. **safety needs of patients**
   c. **alignment with the guidelines of the federal Centers for Medicare and Medicaid Services**

The Vermont Psychiatric Care Hospital (VPCH) opened on July 2, 2014 and is just two weeks into operations within the new facility. As of July, 2014, VPCH is piloting a daily acuity rating scale **(ATTACHMENT A)** for the purpose of considering sufficient direct care staffing to provide effective treatment services for patients admitted to the hospital. Throughout the course of upcoming months, clinical program and business office personnel will continue to fine tune the scale in order to most appropriately capture and further target appropriate staffing levels at the new hospital.

The attached acuity scale is divided into six levels of patient acuity to capture the overall clinical needs of each inpatient. The lowest rating scale, Level 1, reflects inpatients who are assessed as no longer meeting inpatient criteria for hospitalization and appropriate for discharge or transfer to a lower level of care. The highest rating scale, Level 6, reflects inpatients at the highest level of acuity and in need of constant observation and/or require significant staff resources as evidenced by incoming patients who require secure transport or inpatients requiring emergency involuntary interventions or emergency medical response. Patient acuity ratings will be maintained daily. A base level of patient acuity has been established calculating the total number of direct care staff hours needed to staff the hospital operations and design.

Base level staffing includes a minimum nurse-to-patient and mental health specialist-to-patient ratio to staff a unit at full census with patients at Level 3 acuity. Acuity levels above 3 then capture additional staffing needed to provide adequate care, treatment, supervision, and

safety. The numeric rating scale for direct care staff is then joined with a staffing table that incorporates the threshold staffing hours plus any additional acuity identified to meet patient care needs and is then aggregated for total hours needed to staff the hospital facility. Actual hours worked, adjusted for training hours, plus any contractual direct care hours (traveling nurses) are reported and compared to the staffing need identified by the acuity rating. Staff members considered to be indirect or administrative in function are captured in a separate rating scale reflecting the fixed infrastructure needs of these position hours for operating the hospital. These positions are further reflected in the Section 2 of this report. See **ATTACHMENT B** and **Attachment C** for both tracking and graphing of trends over time.

The greatest use of the acuity scale will be retrospective rating of each patient for the prior 24 hour period based on behavior and needs that are evaluated daily. While the tool may offer, with experience and at a later point, a prospective patient rating capability for staffing levels, the most valid rating at this time will come from patient care needs that have already occurred and been provided. Administrative and support staff hours will continue to be evaluated by the functional requirements necessary as outlined in the standards for certification by the Centers for Medicare and Medicaid Services **(ATTACHMENT D)**. This attached information is often referred to as the A and B Tags for hospital certification. A Tags are applicable to any hospital seeking CMS accreditation regardless of size. B tags are the specific psychiatric inpatient hospital standards that must be met for CMS accreditation. These standards and "Tags" are further referenced in Section 2.

Going forward, this information will be collected and analyzed monthly using the tools attached to this report.

2. **Justify and demonstrate need for each of the administrative and support staff included in the plan**

During the past year, VPCH, and formerly the Green Mountain Psychiatric Care Center, has been accredited by the Joint Commission on Accreditation of Health Care Organizations (TJC) and certified by the Center for Medicaid and Medicare Services (CMS). This accreditation and certification was transferred with VPCH during its relocation to Berlin. Each of these organizations will soon review the environment of care in the new facility in Berlin. Neither TJC nor CMS publish numeric staffing standards. Rather the standard is that hospitals have to have adequate staff to accomplish their mission for the inpatient population served. It is left to the hospital to determine what that "right" number of staff is for its facility. One of the most critical issues of concern in developing a staffing plan is the level of acuity of the patients being served. The mission of VPCH is to serve Level I patients who by definition present as the most complex, challenging patients in the state's psychiatric inpatient services system. By virtue of the illness that these patients are experiencing, as a population, they are very demanding in terms of the hospital's requirements for monitoring and oversight responsibilities.

The most significant portion of the staffing allocation for VPCH is in the clinical area of nursing. The Department of Nursing consists of both professional nursing staff and nurse extenders referred to as 'mental health specialists' both of whom provide ongoing direct care to the patients. Basic to any psychiatric hospital is ensuring that the patients, staff and visitors are in a safe environment and that the focus is to move the patient back to the community so that the recovery process for the patient can continue in the least restrictive setting possible. While the new building at Berlin presents a welcoming and bright environment for patients, staff and visitors, it also presents certain challenges to ensuring safety that are not eliminated by the design process.

The design of the Vermont Psychiatric Care Hospital does not create new staffing efficiencies over the former Vermont State Hospital. The open concept design, the multiple rooms on and off the inpatient units that encourage maximum utilization of the available space to create sanctuary and recovery, and expanse of available outdoor green space require monitoring that was more readily provided through limited treatment area space at the former state hospital. The benefit of the more healing design of the new hospital comes with new challenges. In fact, several of the design features of the new hospital functionally promote availability of staffing for patient interaction and compel staffing for purposes of monitoring and safety given the layout of the hospital patient care areas. Some of the examples previously identified are:

Nurses Station Configuration –

The Nurses Station bisects the bedroom areas in each wing, creating two distinct treatment areas. This provides a barrier, both physical and audio, to staff who must now be divided between two smaller areas rather than serving one larger area. It takes more staff to serve the two areas than it would take to serve one of equal size.

Open Concept Dining Areas -

Unlike the former state hospital, the new hospital dining/kitchenette areas, of which there are four, are no longer physically separated areas in the new hospital. Within this new design, staff members no longer have the ability to manage patient access or separate patients who may require less stimulation or who are easily triggered in group settings. For each shift serving meals, two staff are necessary for a significant portion during the shift to manage the areas and serve meals. Within the open design, staff must prep the area for meals, serve trays, clean up, and meet individual patient requests for specific food service or assistance.

Help Desk Function –

The design of the current Nurses Station has been enclosed to create better protection of patient health information being discussed by phone or in-person, as well as preventing unauthorized patient access to hard copy patient documentation, patient monitoring and medical equipment, and medication rooms.

The concept of a help desk positioned before the nurse's station supports ongoing patient access to staff given the artificial separation created to maintain the privacy of other patient information.  This creates a fixed staffing demand as patients need a point of contact with staff to ask for personal items, assistance with the phone, and other immediate questions on the inpatient unit. The Help Desk concept, which as was also in operation at the temporary hospital in Morrisville prior to relocation, was very successful, but did create a fixed need for staffing to immediately respond to patient inquiries. There are a total of four Help Desks at VPCH. Fully staffing this design element requires four dedicated staff per shift 24/7.

Monitors –

Cameras, for monitoring real-time activity given that recording of patient activity has been identified by oversight entities as a potential infringement on patient privacy, are strategically positioned at VPCH for monitoring patient and staff safety.   These monitors are located at the nursing station and also require 24/7 dedicated staffing to monitor in real-time.  If cameras are not actively monitored, there is a liability risk should there be an adverse event and the available surveillance capacity has not been properly utilized to mitigate the occurrence.  Given the number of cameras covering the inpatient units and accessible patient areas, two staff per shift are required for continuous monitoring of inpatient movement.

Room Checks –

The layout of the patient rooms promotes greater privacy and amenities, as each patient bedroom has its own bathroom which the former state hospital did not.  For staff entering a patient room, there are identified blind spots not visible from the doorway, as well as bathrooms which must be routinely checked.  Due to assault potential (such events have occurred), staff are trained never to enter a patient's room alone.  Since the entire patient room cannot be observed from the doorway, two staff are required to conduct checks in the patient bedroom area of the unit. Patient checks are done at regular and as needed intervals around the clock requiring two staff members routinely for this review.

Escorts/Supervision –

Since the main areas in which groups will be conducted are off of the inpatient unit, patients must be monitored to and from these areas by staff.  Even though treatment areas are also within the secure perimeters of the hospital and the hospital itself is a relatively "safe" environment, the hospital remains responsible for ensuring patient safety and monitoring at all times.  Additionally, mental health specialists are assigned to treatment activities with Recovery Service staff to assure that sufficient staffing is in accompaniment and available for the group activity and response to individual patient needs and circumstances. There are no alarms or mechanisms to summon help in the event of an emergency, so it is essential that sufficient direct care staff be available and assigned to this area during group times. The number of staff required will be impacted upon by the number of patients present and their level of acuity.

Other Activities requiring Staff Supervision –

- The tub room on the each inpatient unit at VPCH is a high risk area for injury. For those patients not assessed as safe to be alone in the room, staff must be available to provide supervision.

- Outdoor green space requires staff to monitor patients for safety even though outdoor space is enclosed. Generally, a minimum of two staff is required for up to five patients, with a third staff member added for 6-8 patients, etc.

- When an individual arrives for admission, transport personnel transfer the individual to hospital staff and leave. Inpatient staff must be deployed to the Admissions area to ensure adequate patient management and safety throughout the admissions process for whatever amount of time is needed to process the incoming patient.

- Housekeeping and/or maintenance staff must be accompanied by VPCH staff when cleaning patient rooms or maintaining areas on the inpatient units. VPCH staff solicit the patient's permission to clean the room or manage the perimeters of the maintenance area to ensure that housekeepers or maintenance workers can perform their duties safely and without interruption. These are daily functions and require multiple hours of staff time.

- Individualized patient needs related to constant observation, screening/escorting visitors, supervising visits, monitoring phone calls, and assisting patients who require supervised computer use drive staffing demands at varying intervals throughout the day.

The current staffing plan for the opening of the hospital was developed by the hospital administration with DMH, and approved by the Administration and Legislature. The projected staffing needs took into account the acuity of patients with the design of the new building and consideration of standards for both TJC accreditation and CMS certification. The staffing plan was reviewed and supported by Dr. Kevin Huckshorn, a national expert on reducing seclusion and restraint and staffing patterns for acute psychiatric hospital settings **(ATTACHMENT E)**. The American Psychiatric Nursing Association also has published a position paper on staffing for acute psychiatric units, which is provided as a reference to current staffing considerations **(ATTACHMENT F)**. Its first recommendation is that a hospital adopt a staffing committee, which VPCH has done, and it has a list of other recommendations but is clear there is no one numeric formula that can be used instead the number needs to take into account patient acuity, environment and other individual state and facility factors.

Brief overview of Position Justification:

- Of these 183 personnel, 56 are not considered direct care positions (Nursing supervisors, Activity Therapists, Psychologists, and Social Workers).
- Non-direct, administrative position functions are necessary to meet the minimum standards needed for accreditation and certification. (Education, Director and Associate Director of Nursing, and CEO, for example).
- Several of the functions require more than 1 FTE to cover multiple shifts at the hospital. For example, Staffing and Admissions are 24/7 activities, and it would take 5 FTE to ensure that 1 person was available for all shifts.
- A number of responsibilities are held by one staff person with back-up capacity for periods of absence by another position to maximize cross coverage opportunities.

The justification overview of administrative and non-direct care personnel for VPCH follows below. The information is compiled by each position title, the full-time equivalent (FTE) required for this function, any comment specific to its categorization, the role justification that the function fulfills at the hospital, and the CMS standard citation of the position responsibilities for the required function.

**VERMONT PSYCHIATRIC CARE HOSPITAL**     **Staffing Justification - FY15**

| Position | FTE's | Comment | Justification | CMS Conditions |
|---|---|---|---|---|
| Med Records (Health Info Spec) | 1.0 | One dedicated staff for hospital | The hospital must have a medical record service that has administrative responsibility for medical records. Responsible for all aspects of facility records management and compliance. Includes the management of active and closed medical records; ensuring completion, filing, and retrieval of records in accordance with statute and federal regulations. | Tag: A 0431, 0438, Tag: B 101, 103. |
| Unit support specialist | 2.0 | Two staff for four patient care areas with no replacement factor for absence | Responsible for filing and maintaining order in patient medical records, maintains storage of forms and other supplies on the unit, provides limited support to treatment staff, connects documentation on the patient care units with the off-unit Medical Records department. | Tag: A 0432. |
| Admin Assistant B | 4.0 | Position title for multi-functional administrative support personnel. Day and partial evening coverage 7 days per week | Reception for the hospital. Greets and orients visitors, communicates about visitors and others in the hospital's main entrance to unit staff and other hospital employees, routes calls, transcribes physician documentation for the medical record, deals with incoming and outgoing mail. (7 days per week/days/evenings). | Tag: A-0431 A non-direct care infrastructure position that manages the flow of individuals within the facility; incoming and outgoing communications in multiple forms, and provides initial screening functions for safety and security at the facility. |
| Mental Health Scheduling Coordinator | 5.0 | 1 staff per shift 24/7 | Provides 24/7 coverage in Staffing Office. Prepares staff schedules, processes time off requests, contacts staff to fill shortages created by absence, coordinates Workers Comp cases with other State agencies, processes FMLA requests, processes payroll, and provides various reports upon request. | Tag: B-149, B-150 An infrastructure position that provides a number of core nursing department functions essential to the operation of a hospital. |

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|---|---|---|---|---|
| Psychiatric Admissions specialists | 5.0 | 1 staff per shift 24/7 | Acts as hub for 24/7 statewide point of contact with community service providers and hospitals for involuntary hospitalizations. Processes all admissions/discharges to VPCH. Schedules and coordinates patient transports by sheriffs or alternative transport teams. Provides centralized DMH tracking of patients under the care and custody of the DMH Commissioner statewide, including those waiting for an inpatient bed (EE, Voluntary, Warrants, Minors). | Tag: A-0701 An infrastructure position that provides patient-specific and DMH-system care management functions. Organizes and facilities the movement of patients into and out of VPCH at the times of admission and discharge, and patient transports during hospitalization. |
| Hospital Operations Chief | 1.0 | One supervisory staff with facility operations coordinator assist and backup for hospital | Directs Operations of Medical Records, Admin B, Facilities, Admissions, Kitchen staff | Tag: A-0144, Tag: A-0432, Tag: A-0537. |
| Facilities Operations Coordinator | 1.0 | One staff for hospital with no replacement factor | Responsible for the facility operations (CMS/JC). Oversees all aspects of the physical environment throughout the hospital. Collaborates actively with Buildings and General Services managers and employees; manages hazardous waste. | Tag: A-0144, 0537. |
| Storekeeper B | 1.0 | One staff for hospital with no replacement factor | Orders, receives, documents, organizes and stores all physical materials delivered to the facility - medical and nursing supplies, food, beverages and other nutrition service supplies, laundry and linen, cleaning supplies, furniture, etc. | Tag: A-0724; Tag: A-0622 An infrastructure position with overall responsibility for acquiring and managing all supply and storage of dry goods necessary to operate a hospital. |
| Nursing Education | 2.0 | two staff for all orientation and mandatory trainings and management of training records for all staff of hospital | Provides orientation for new employees, oversees competency process, provides ongoing training, runs Vera Hanks School of Psychiatric Technology, ensures documentation of training and maintenance of records. | Tag: A-0194, 0196, 0200. |
| Executive Office Mgr. | 1.0 | One staff for hospital with no replacement factor | Direct collaboration with and administrative support to CEO, Medical Director and Director of Nursing. Manages credentialing activity for medical staff and all administrative support functions for CEO and assigned staff. | Tag A-0022. |

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|---|---|---|---|---|
| Supervising Chef | 1.0 | One staff for hospital with no replacement factor | Responsible for hospital health standards and all kitchen operations. Creates menus, orders food, and oversees kitchen staff in all areas of meal preparation 7 days/week. | Tag: A-0620. |
| Cook C | 3.0 | Three staff for 7 days per week | Prepares meals for patients 7 days/week; 3 meals/day. | Tag: A-0620. |
| Food Service worker | 3.0 | Three staff for 7 days per week | Food preparation and cleaning of kitchen 7 days/week; 3 meals/day. | Tag: A-0620. |
| Pharmacy | 2.0 | Contracted | Provide pharmaceutical services 24/7 for hospital. Procures, stores, packages, dispenses, orders, distributes and disposes of all medications and medication related devices. Sets-up and manages pharmacy-related software system. Consults with physicians, registered nurses and patients regarding medications effects, side effects, drug-drug and food-drug interactions. | Tag: A-0490. |
| QA (Director of Quality) | 1.0 | One staff for hospital with back up of Risk Management | Directs Quality Program for Hospital. Oversees patient and staff safety, quality of care, treatment, and services. Responsible for maintaining a culture of safety. Leads policy development, patient grievance processes, event reporting system, external and internal analysis and reporting of data, regulatory compliance, hospital risk management and participates in utilization review. | Tag: A-0166, Tag: A 0120, Tag: A-0263, Tag: A-0652. |
| Risk Mgmnt/Pat Safety | 1.0 | One staff for hospital with no replacement factor | Collaborates with Director of Quality and represents Quality Department in the Director's absence. Engages in activities which increase patient and staff safety, quality of care, treatment and services. Participates in development and management of policies, patient grievances, event reporting, analysis and corrective responses, external and internal analysis and reporting of data, regulatory compliance/risk management. | Tag:A-0286. |

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| Utilization Review | 1.0 | One staff for hospital with no replacement factor | Provides utilization review support functions to medical staff in determining patient acuity and continued stay. Collects, manages, and organizes quality assurance and quality improvement data for all clinical and operational departments. Produces summary reports of hospital performance for internal and external audiences. Conducts quantitative audits, provides support to improvement processes. | Tag: A-0297. |
| Registered Dietician | 1.0 | One staff for hospital with no replacement factor | Provides medical nutrition therapy (MNT) to hospitalized patients. Completes screenings, assessments, and ongoing monitoring of patients' nutritional care. Develops special diets as ordered by physicians. Analyzes food intake patterns of patients including between-meal feedings and makes recommendations based on evident needs. Consults with patients, families, and clinical treatment staff. | Tag: A-0620, 0621. |
| Director of Nursing | 1.0 | non-ratio Direct care | Human resource management (evaluations, feedback, corrective action), ensures regulatory compliance, ensures follow up on event reports, oversees mandated reporting, assists with policy/procedure development, liaison for contracted services, coverage as acting head of hospital, etc. | Tag A-0385, 0396. |
| Asst Director of Nursing | 1.0 | Not direct care per standards and back up for Director of Nursing | Interviews job applicants, oversees Staffing Office and its' functions, coordinates availability of direct care supplies, facilitates meetings with nurses regarding professional practice issues, oversees disciplinary actions | Tag: A-0392/NR.02.03.01. |
| Nursing Services Supervisor | 6.0 | Not direct care per standards | Provides direct oversight and coordination of nursing units, oversees shift unit staffing, oversees personnel matters and management of emergencies within the hospital | Tag: A-0393, 0395, 0397. |

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|---|---|---|---|---|
| Therapeutic Activity Chief | 1.0 | One staff, not considered in direct care ratio, with backup of recovery personnel | Designs and directs Recovery Services program of therapeutic and leisure activities in groups and with individuals.  Provides direct care to patients with other Recovery Service employees. | Tag: B-156. |
| Activity Therapist | 4.0 | Not considered in direct care ratio.  Staff cross both day and evening shifts and weekend hours. | CMS Requires minimum of 20 hours per week of Active Treatment.  Recovery staff provide a broad curriculum of therapeutic and leisure activities in groups and for individuals.  Maintain safety in managing patient use of restricted items.  Participate in multidisciplinary treatment team assessments and planning.  Promote philosophy of patient-driven Recovery and Wellness Planning.  Emphasize evidence-based and evidence-supported practices. | Tag A-1123, Tag B-158. |
| CEO | 1.0 | | Responsible for managing the entire hospital.  All department heads report directly to the CEO. | Tag: A-0057, Tag: A-0309. |
| Psychologist | 2.0 | Not direct care per standards. | Provide behaviorally-oriented education and training for direct-care nursing staff through group clinical supervision; consult with treatment teams, including patients, to develop pro-social and adaptive behaviors and to minimize behaviors that interfere with recovery and community re-integration; assess patients exhibiting behavior problems and assist in developing behavioral interventions; provide psychometric assessments for diagnostic clarification; evaluate and treat trauma-based behaviors. | Tag: A-0064, Tag: B-151. |
| Social Services Chief | 1.0 | Not considered direct care.  One staff with backup of social work staff | Clinical and administrative oversight of social work department.  As a clinician, develops Social Assessment; participates in discharge planning, arranging follow-up, exchanges information with sources outside the hospital; engages with family members and others with whom the patient has a relationship; provides education support and | Tag: A-0799-0837, Tag: B-108, 128 133-140. |

| | | | advocacy for family members and others. | |
|---|---|---|---|---|
| Psychiatric Social Worker | 3.0 | Not considered direct care. No replacement factor for 1:6 patient coverage ratio with Social Services Chief | Develops Social Assessment; participates in discharge planning, arranging follow-up, exchanges information with sources outside the hospital; engages with family members and others with whom the patient has a relationship; provides education support and advocacy for family members and others. | Tag: A-0799-0837, Tag: B-128, 133-140. |
| Nurses | 34.0 | Direct Care | Provide professional nursing care according to the Nursing Process (Assessment, Planning, Intervention, Evaluation) including admission, treatment planning, monitoring health, documentation, medication administration, patient education, assisting with ADLs (Activities of Daily Living, such as washing and dressing), etc. Supervises Mental Health Specialists and oversees provision of a safe environment and responses to emergencies that may arise. | Tag: B-127, 136, 146. |
| Mental Health Specialists | 93.0 | Direct Care | Provide visual monitoring (including frequent checks and constant observation), escorts of patients within the hospital, transport of patients outside of the hospital, assist Recovery Services in providing individualized patient support or groups, scan the environment for potential risks, maintain required documentation, and response to emergencies that may arise. | Tag B 136, 150. |
| | **183.0** | | | |

3. **Identify, in consultation with the State's Chief Performance Officer, the desired outcomes, performance measures, and data requirements required to measure whether the hospital is achieving the stated outcomes for:**
   a. **patient care;**
   b. **effectiveness of treatment services;**
   c. **patient monitoring; and**
   d. **safety requirement**


Results-Based Accountability Background –


Results-Based Accountability™ (RBA), also known as Outcomes-Based Accountability™ (OBA), is a disciplined way of thinking and taking action to improve the lives of children, youth, families, adults and the community as a whole. RBA is also used by organizations to improve the performance of their programs or services. Developed by Mark Friedman and described in his book *Trying Hard is Not Good Enough*, RBA is being used throughout the United States, and in countries around the world, to produce measurable change in people's lives.

RBA improves the performance of programs because RBA:
- Gets from talk to action quickly;
- Is a simple, common sense process that everyone can understand;
- Helps groups to surface and challenge assumptions that can be barriers to innovation;
- Builds collaboration and consensus;
- Uses data and transparency to ensure accountability for both the well-being of people and the performance of programs.


RBA uses a data-driven, decision-making process to get beyond talking about problems to taking action to solve problems. It is designed as a simple, common sense framework that everyone can understand. RBA starts with ends and works backward, towards means. The "end" or difference you are trying to make looks slightly different if you are working on a broad community level or are focusing on your specific program or organization.

Organizations and programs can only be accountable for the customers they serve.  RBA helps organizations by identifying specific customers who benefit from the services the organization provides. The performance measures focus on whether customers are better off as a result of services.  These performance measures also look at the quality and efficiency of these services.  RBA asks three simple questions to get at the most important performance measures:

How much did we do?
How well did we do it?
Is anyone better off?

In consultation with the State's Chief Performance Officer, the desired outcomes, performance measures, and data requirements for VPCH follow:

| Vermont Psychiatric Care Hospital (VPCH): Performance Accountability |
|---|

**Mission**: The Vermont Psychiatric Care Hospital provides excellent care and treatment in a recovery-oriented, safe, respectful environment that promotes empowerment, hope and quality of life for the individuals it serves.

**Desired Hospital Outcome(s):**
1. All patients in the care of the VPCH are treated effectively and are monitored appropriately to achieve their individual care plans and to maintain a safe environment of care.
2. The VPCH maintains approval by the TJC and CMS for leadership, management, clinical program and environment of care, and ensures a high standard of operations and quality services by an extensive program of data collection, tracking, and trend analysis monitored by VPCH.

**Client Population:**
The VPCH serves adult patients who are involuntarily admitted to inpatient care. Most patients are Level 1, an involuntary inpatient designation reserved for patients with risk of imminent harm to self or others and requiring significant resources.

| | HOW MUCH? | HOW WELL? |
|---|---|---|
| **Patient Care** | ▪ Average daily census<br>▪ # commitments<br>▪ # Hours of seclusion and restraint annually | ▪ Rate of seclusion and restraint per 1,000 patient hours<br>▪ % of patients who do not receive EIPs during their stay<br>▪ Rates of staff retention |
| **Effective Treatment** | ▪ Average length of stay for discharged patients<br>▪ Median length of stay for discharged patients<br>▪ # patients readmitted involuntarily within 30 days of discharge | ▪ 30 day readmission rate to involuntary inpatient care statewide<br>▪ % patients satisfied with treatment<br>▪ Average acuity of patients |
| **Patient Monitoring** | ▪ # of patient elopements<br>▪ # of sentinel events<br>▪ # hours of 1:1 observation | ▪ % of patients with elopements<br>▪ % of patients involved in sentinel events<br>▪ Rate of 1:1 observation per 1,000 patient hours |
| **Safety Requirements** | ▪ # of staff trainings conducted each year<br>▪ # of safety drills conducted<br>▪ # of employee injuries | ▪ % completion of annual staff mandatory trainings<br>▪ % of employees who are injured by patients<br>▪ % of medication errors reaching the patient of all medication dispersals |
| **IS ANYONE BETTER OFF?** | | |
| **Patient Care** | ▪ % of people who are discharged to stable housing | |
| **Effective Treatment** | ▪ % of patients receiving state funded services in the community within 30 days of discharge | |
| **Patient Monitoring** | ▪ % of patients who report they feel safe | |
| **Safety Requirements** | ▪ % of patients who report satisfaction with VPCH environment | |

**About the data**: *How frequently reported and to whom? What is the data source? Plans to develop Results Scorecard, etc.*

All measures will be reported on an annual basis. Data come from VPCH data collection in PsychConsult, with a few exceptions. Patient ratings of safety, satisfaction, come from a VPCH perception of care survey administered after inpatient discharge. Data regarding state funded services after discharge come from Designated Agency Monthly Service Reports (MSR) and Medicaid Claims data.

Data Development Agenda (any items you cannot measure now but would like to measure in the future):

Effective Treatment

How Well:
- % of patients actively engaged with group therapy
- % of patients invited to treatment team meetings
- % of patients participating in treatment team meetings
- % of patients actively engaged with treatment options

Better Off:
- % of patients that reach stated goals in individual care plans
- % family members satisfied with patient care

Patient Monitoring

How Much:
- # of admissions requiring 15 minute checks (or greater levels of supervision)  during their stay

How Well:
- % of staff working mandatory shifts


Most of these items will be measurable when a fully functional electronic health record is implemented at VPCH.

VPCH Patient Acuity Rating Scale (PILOT JULY 2014)

| Level | Applies to Patient |
|---|---|
| 1 | Ready for discharge or transfer<br>No longer meets criteria for hospitalization |
| 2 | Independent with ADLs<br>Cooperative with program |
| 3 | Assessment/documentation/engagement requiring < 20 min. on a shift<br>Assistance with ADLs/physical care < 20 min. on a shift<br>Treatment Plan Meeting<br>Phlebotomy<br>Fingersticks for blood glucose<br>30 min. checks<br>Transport by social worker |
| 4 | Refusing Medication<br>15 minute checks<br>Assessment/documentation/engagement requiring > 20 min. on a shift<br>Supervised visits and/or phone calls<br>Behavioral Plan in place<br>Assistance with ADLs/physical care > 20 min. on a shift<br>Requiring frequent redirection<br>Behavioral Plan in place |
| 5 | Manual restraint<br>Mechanical restraint or seclusion < 15 min.<br>New admission during this 24 hrs.<br>Transport by Nursing staff<br>High Risk for Falls (by Falls Risk)<br>Non-Emergency Involuntary Medication<br>Frequent vital signs, neuro checks, etc. |
| 6 | Constant Observation (during any part of the 24 hrs.)<br>Transport by Sheriffs or ambulance<br>Mechanical restraint or seclusion > 15 min.<br>Emergency Involuntary Medication<br>Medical emergency<br>Need for staff response from other units |

# ATTACHMENT B - VPCH Base Staffing Requirement

| | A unit | | B unit | | C unit | | D unit | | TOTAL VPCH | |
|---|---|---|---|---|---|---|---|---|---|---|
| | # beds | 8 | # beds | 8 | # beds | 5 | # beds | 4 | # beds | 25 |
| | hours | fte | hours | fte | hours | fte | hours | fte | hours | fte |
| **Day Shift** | | | | | | | | | | |
| **Charge Nurse** | | **0** | | **0** | | **0** | | **0** | **0** | **0** |
| **Nurse** | **16** | **2** | **16** | **2** | **12** | **1.5** | **12** | **1.5** | **56** | **7** |
| **Mental Health Specialist:** | | | | | | | | | | |
| Checks | 16 | 2 | 16 | 2 | 8 | 1 | 8 | 1 | 48 | 6 |
| Help Desk | 4 | 0.5 | 4 | 0.5 | 4 | 0.5 | 4 | 0.5 | 16 | 2 |
| Dining Room/meals | 4 | 0.5 | 4 | 0.5 | 4 | 0.5 | 4 | 0.5 | 16 | 2 |
| Monitor | 4 | 0.5 | 4 | 0.5 | 4 | 0.5 | 4 | 0.5 | 16 | 2 |
| Escort for housekeeping | 1 | 0.125 | 1 | 0.125 | 1 | 0.125 | 1 | 0.125 | 4 | 0.5 |
| Yard Supervision, Escorts, standby for admissions | 3 | 0.375 | 3 | 0.375 | 3 | 0.375 | 3 | 0.375 | 12 | 1.5 |
| Learning Center, Em response, break relief, standby for nurse, physician, escorts for SW, Interviews, pharm tech, BGS | 16 | 2 | 16 | 2 | 8 | 1 | 8 | 1 | 48 | 6 |
| **Total MH Specialist** | **48** | **6** | **48** | **6** | **32** | **4** | **32** | **4** | **160** | **20** |
| **Total hours needed Day Shift** | **64** | **8** | **64** | **8** | **44** | **5.5** | **44** | **5.5** | **216** | **27** |
| | | | | | | | | | | |
| **Evening Shift** | | | | | | | | | | |
| **Charge Nurse** | | **0** | | **0** | | **0** | | **0** | **0** | **0** |
| **Nurse** | **16** | **2** | **16** | **2** | **12** | **1.5** | **12** | **1.5** | **56** | **7** |
| **Mental Health Specialist:** | | | | | | | | | | |
| Checks | 16 | 2 | 16 | 2 | 8 | 1 | 8 | 1 | 48 | 6 |
| Help Desk | 4 | 0.5 | 4 | 0.5 | 4 | 0.5 | 4 | 0.5 | 16 | 2 |
| Dining Room/meals | 4 | 0.5 | 4 | 0.5 | 4 | 0.5 | 4 | 0.5 | 16 | 2 |
| Monitor | 4 | 0.5 | 4 | 0.5 | 4 | 0.5 | 4 | 0.5 | 16 | 2 |
| Escort for housekeeping | 1.0 | 0.125 | 1 | 0.125 | 1 | 0.125 | 1 | 0.125 | 4 | 0.5 |
| Yard Supervision, Escorts, standby for admissions | 3 | 0.375 | 3 | 0.375 | 3 | 0.375 | 3 | 0.375 | 12 | 1.5 |
| Learning Center, Em response, break relief, standby for nurse, physician, escorts for SW, Interviews, pharm tech, BGS | 16 | 2 | 16 | 2 | 8 | 1 | 8 | 1 | 48 | 6 |
| **Total MH Specialist** | **48** | **6** | **48** | **6** | **32** | **4** | **32** | **4** | **160** | **20** |
| **Total hours needed Evening Shift** | **64** | **8.0** | **64** | **8** | **44** | **5.5** | **44** | **5.5** | **216** | **27** |
| | | | | | | | | | | |
| **Night Shift** | | | | | | | | | | |
| **Charge Nurse** | | **0** | | **0** | | **0** | | **0** | **0** | **0** |
| **Nurse** | **16** | **2** | **16** | **2** | **8** | **1** | **8** | **1** | **48** | **6** |
| **Mental Health Specialist:** | | | | | | | | | | |
| Checks | 16 | 2 | 16 | 2 | 8 | 1 | 8 | 1 | 48 | 6 |
| Help Desk | | 0 | | 0 | | 0 | | 0 | 0 | 0 |
| Dining Room/meals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Monitor | 4 | 0.5 | 4 | 0.5 | 4 | 0.5 | 4 | 0.5 | 16 | 2 |
| Em response, break relief, standby for nurse, physician, escorts for SW, Interviews, pharm tech, BGS | 12 | 1.5 | 12 | 1.5 | 12 | 1.5 | 12 | 1.5 | 48 | 6 |
| **Total MH Specialist** | **32** | **4** | **32** | **4** | **24** | **3** | **24** | **3** | **112** | **14** |
| **Total hours needed Night Shift** | **48** | **6** | **48** | **6** | **32** | **4** | **32** | **4** | **160** | **20** |
| | | | | | | | | | | |
| **Grand Total Need (does not include leave factor)** | **176** | **22** | **176** | **22** | **120** | **15** | **120** | **15** | **592** | **74** |
| **Appropriated (does not include leave factor)** | | **22** | | **22** | | **15** | | **15** | | **74** |
| **Appropriated with leave factor (ties to total approp #)** | | **37** | | **37** | | **27** | | **27** | | **127** |
| **Need with leave factor** | | **37** | | **37** | | **27** | | **27** | | **127** |

**ATTACHMENT C - Staffing Acuity Graph**

|  | 6/28/2014 |  | 7/12/2014 |  | 7/26/2014 |
|---|---|---|---|---|---|
| VPCH Regular Hrs Less Adj | 1861 |  | 0 |  | 0 |
| VPCHTemp/OT Hrs | 1600 |  | 0 |  | 0 |
| VPCHHours needed |  | 3440.0 |  | 0.0 |  | 0.0 |
| VPCH Non Direct Care Hours | 4480 | 4480 | 4480 | 4480 | 4480 | 4480 | 4480 | 4480 |

**VPCH Direct Care Hours Needed vs Actual- FY15**



Legend: VPCH Regular Hrs Less Adj | VPCHTemp/OT Hrs | VPCHHours needed | VPCH Non Direct Care Hours 4480
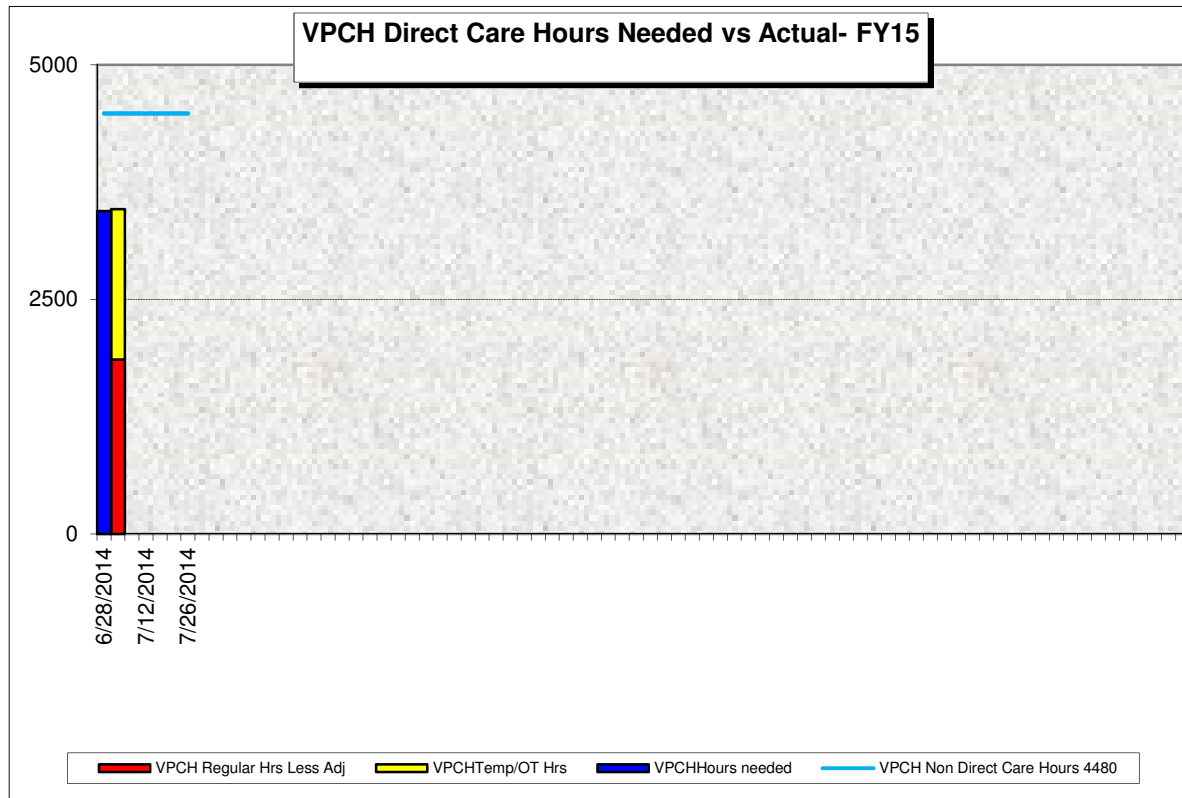
ATTACHMENT D

CMS Standards - A Tag & B Tag Combined

Please note that this document is 530 pages long so a link (which you will need to copy and paste into your browser) to our website has been provided for your convenience:

http://mentalhealth.vermont.gov/sites/dmh/files/report/legislative/ATTACHMENT_D_CMS_Standards_%E2%80%93_Tags_A_%26_B_530_pages.pdf

**ATTACHMENT E**

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February 26, 2014

**Purpose of this Consultation**

Thank you for asking me to review your staffing plan for the new public Vermont Psychiatric Care Hospital. This new facility is designed to serve persons with serious mental conditions and people found, by your courts, to be Incompetent to Proceed to Trial or Not Guilty by Reason of Insanity or Mental Illness. I apologize that I do not know your laws that well to use the correct terminology.

1. I have reviewed numerous documents to date. These include:
   A. Your actual staffing proposal for this new 25 bed hospital
   B. Your policies on Emergency Involuntary Procedures
   C. Your data on actual emergency procedures used in last few years
   D. The GMPCC/VPCH Strategic Plan
   E. The "Staff Responsibilities" document sent by Mr. Jeff Rothenberg

2. I also participated in three conference calls with key state leadership staff to get clarity on their plans and rationale for these staffing plans.

3. After a thorough review and you and your staff's patience in answering all my questions I will offer the following comments and recommendations.

**Consultant Comments on the new Vermont Psychiatric Care Hospital Staffing Plan**

1. As you already know, decisions on how to staff state mental health (MH) hospitals are a complex and difficult task. There are no national standards for staffing state mental health hospitals. That is because hospital staffing patterns rely on variables that cannot be often compared to other hospitals, or other states. Staffing patterns used by state MH hospitals are predicated on the layout of the facility, the type and acuity of persons served in that hospital, the type of staff employed, the use of video cameras, and the history of the said hospital. All of these variables inform individual hospital staffing decisions.

2. I reviewed your staffing proposal for this 25-bed hospital. On first glance, I found your staffing to be well over what I was used to. But once I was introduced to your new hospital facility layout, I understood completely your staffing plan.

   The new Vermont Psychiatric Care Hospital plans must be lauded for being very progressive and very respectful of persons served privacy and space. But the other side of this very progressive work is that usual staffing allowances must go up. It is much easier to staff an institutional facility with shared baths, in one long rectangular building, with full "line of sight", than it is to staff a new facility, such as yours is going to be. With privacy and respect in mind. And good for you as the more that states embrace the need to build mental health hospitals with privacy and respect in mind, the more our country can move away from our past treatment of individuals with serious mental illness. Kudos to you to help lead the way.

3. Also important is the fact that Vermont does not have a forensic, stand-alone hospital to manage the care for persons that are found, by the courts, to be Incompetent to Proceed to Trial (ITP) or Not Guilty by Reason of Mental Illness (NGRI). This nomenclature varies among states but, the fact is, that your new hospital will be mixing these forensically involved individuals with your non-legally involved individuals with mental illness.

   You are the first state I have known that mixes these populations. I think that this is risky for Vermont, as clients found to be ITP or NGRI are essentially the Department of Corrections' clients and are widely, in other states, believed to be a significant risk to your other hospital clients who are not legally involved.

   In Delaware, we have a stand-alone unit for up to 40 of these clients. From my experience here, and in FL, probably 60% of these forensically involved individuals are fine. It is the other 40% of these clients who can pose a real risk to your other clients and your staff. And the expectation that you serve them together, with regular Vermont citizens who are just ill, is of concern to me also.

4. Your lack of any Security Staff, in your overall staff mix is troubling to me. My hospital in DE is only 115 beds now. Forty of these beds are forensic in a stand-alone unit. I have only has 1-2 Security Staff, per shift on the civil side But they perform a very important function in terms of perimeter security and a uniform when sometimes that is needed. But we also have another set of security corrections officers on the Forensic Unit due to the assumed dangerousness of only a few of these clients.

5. Finally, this new staffing pattern should greatly reduce your use of overtime and mandation. But, to be sure that this happens you will need to have collected baseline data on the use of OT and Mandation in your old hospital to compare with your new hospital. And one of your leaders will need to be assigned to your staffing office so you can be very comfortable about who is making staffing decisions and calling people in. This latter function is where many state hospitals lose control as they do not monitor these decisions and leave these decisions to pretty low level staff. This information should go into your state and facility-wide Performance Improvement Activities so that someone is monitoring your use of staff at this hospital and your outcomes

**Recommendations**

1. You will need time, at least a year, to move into this new facility and train your VSH staff on their responsibilities in working in this new facility. You will also need time to settle the persons that you are serving into this new setting. I have experience in moving 350 persons, from an old and decrepit hospital to a new one.  That was a great success but a number of events need to occur in this process.

2. I expect that once you, and your staff, moves into this new facility you will be able to analyze your real staffing needs in a way that is not possible currently. And would again suggest that you analyze these needs by assuring that lead staff spend time on these two units for the next year. If lead staff do not spend time on these units you will never really know what is needed.

3. I would suggest since this move in imminent, that you provide the legislature a report on your experiences in running this new VT Psychiatric Care Hospital by next January 2015.

4. I would suggest that you monitor the use of overtime and mandation, from baseline, to your move into this new hospital. These outcome data points should decline, from baseline. If they do not something is wrong. Starting with your staffing office and who is making these decisions to call people in.

5. I also suggest that, once you new hospital is stabilized, that you again get your new VSH staff educated on the Six Core Strategies for Reducing Violence and the Use of SR in MH Settings. And on best care and treatment of people admitted to hospitals so that they do not stay very long. Does not need to include me. I have colleagues that also do this work to train on this evidence-based practice.

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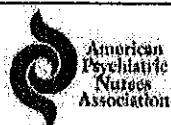
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What is This?

# APNA Position Statement: Staffing Inpatient Psychiatric Units

## Introduction

In 2004 there were 1.8 million admissions to general hospitals for mental health and substance abuse issues (AHRQ, 2007). On the basis of admission criteria, these patients are among the sickest and most vulnerable of mentally ill individuals. Registered nurses (RNs) maintain 24-hour accountability for all aspects of inpatient care, particularly in organizing conditions for healing, reengagement with recovery, and the safety of patients and staff.

Ensuring proper RN staffing levels on inpatient psychiatric-mental health units is vital given the increasing severity of illness of hospitalized mental health patients and the mounting evidence that nurse staffing levels influence outcomes. The risk for adverse outcomes rises as the ratio of patients to nursing staff increases.

Therefore, the American Psychiatric Nurses Association (APNA), as the largest professional organization representing psychiatric nurses, convened a work group to make recommendations for determining staffing needs of inpatient psychiatric units that will protect the quality of care and the safety of both patients and staff. This position paper details the group's findings and recommendations based on a comprehensive review of the literature.

## Discussion

### Quality and safety

In the last 10 years there has been intense national interest in patient safety and the quality of hospital care (AHQR, 2006; Hughes, 2008; IOM, 2001; Page, 2004). A parallel trajectory has established the relationship between nurse staffing and hospital quality/safety (Kane, Shamliyan, Mueller, Duval, & Wilt, 2007; Stanton & Rutherford, 2004; Unruh, 2008). Industry leaders have concluded that registered nurses are critical to the quality of nursing care (Needleman & Hassmiller, 2009) and that higher nurse staffing protects patients from poor outcomes (Blegen, Goode, Spetz, Vaughn, & Park, 2011). This research has benefited from the growing consensus on indicators of quality that are sensitive to nursing care and related to nursing staff levels (National Quality Forum, 2004, 2009). Across all hospital settings, research

is mounting that substantiates the relationship between nurse staffing levels and specific quality indicators such as lower rates of infection, shorter lengths of stay, and lower rates of "failure to rescue" (Needleman et al., 2011; Needleman, Buerhaus, Mattke, Stewart, & Zelevinsky, 2002). Although there are patient-centered indicators on the list that span hospital specialties, the only indicator that has some specificity to psychiatric nursing is restraint prevalence.

Psychiatric nurses are concerned about safety and quality (Fetter, 2009). However, experts agree that there is a "thin" amount of work in the area of psychiatric inpatient care and nurse staffing (Clarke & Donaldson, 2008), particularly in the area of how to measure staffing, isolate outcomes, and link the two variables. Psychiatric clinicians have forwarded sound ideas on the elements of high-quality mental health care, and several apply to inpatient treatment: patient-centeredness, the experience of care, recovery practices, shared decision making, and self-management (Pincus, Spaeth-Rublee, & Watkins, 2011). The Hospital-Based Inpatient Psychiatric Services Core Measures also inform nursing on elements of inpatient quality. Drawing upon national frameworks for measuring staffing levels, particularly systems using shift target levels (Needleman et al., 2011), creates the roadmap for psychiatric inpatient quality and staffing that should be useful in the future for designing studies of staffing effectiveness on psychiatric inpatient units.

### Factors that influence staffing

Studies show that multiple variables affect staffing needs besides the number of patients. Variables include acuity and multimorbidity, patient flow on each shift (number of admissions, discharges, transfers, and procedures), education and experience of RNs, nursing skill mix, nurse workload, unit physical environment, technology, care delivery model, and finances. These factors influence outcomes for patients, staff, and hospitals.

*Acuity.* Aligning staffing based on patient needs and acuity is an important consideration for risk mitigation and safety on the unit (Delaney & Johnson, 2006). Patient acuity is determined at the unit level by evaluating the

patient's status against defined criteria or patient attributes—factors that have historically required higher or lower levels of care. The impact of patient acuity on staffing needs also varies according to unit flow (admissions and discharges), unit location, and unit function. Patient acuity is not static but must be reevaluated routinely throughout the shift to ensure that staffing is appropriate to meet the needs of the patient population.

Recognizing the growing impact of patient acuity on adequate staffing, many organizations have used Medicare's case mix index (average diagnosis-related group relative weight for that hospital) to assist in predicting patient acuity. Unfortunately, case mix index is more medically focused and does not provide an accurate depiction of nursing care needs for each patient or aggregate. The use of nursing intensity weights likely provides a clearer picture of nursing care needs but is not yet a nationally accepted standard for determining acuity-based staffing needs (Mark & Harless, 2011).

In an environment with increased regulatory demands, nursing is challenged with balancing current staffing models, acuity tools for effectiveness, and quality patient outcomes. To date, there is no standardized acuity tool available for behavioral health units. Though they have added core measures for screening for suicide and risk of violence, nursing managers and researchers have relied on using Medicare case mix index or adapting acuity instruments similar to those used on medical units (Grantham, 2010; Mark & Harless, 2011). The American Nurses Credentialing Center (ANCC) Magnet Recognition program has developed a framework emphasizing the importance of empowering nurses to practice autonomously in a shared governance model (ANCC, 2011). The lack of an acuity measure that accurately depicts psychiatric nursing care needs according to patient acuity hampers the work of staff nurses, particularly in meeting their responsibility to adapt care based on the acuity of their patient.

However, adjusting staffing for patients with varying severity of symptoms is critical to safety and quality outcomes. Staffing must be flexible to match staff competence with patient needs.

*Multimorbidity.* Another patient characteristic that affects staffing needs is comorbidity or multimorbidity. Collectively, available evidence suggests that patients on psychiatric units have multiple and complex physical and mental health problems that require the attention of an RN (Druss & Reisinger Walker, 2011; Kronick, Bella, & Gilmer, 2009; Safford, Allison, & Kiefe, 2007; Valderas, Starfield, Sibbald, Salisbury, & Roland, 2009). A main determinant of patient outcomes from psychiatric hospitalizations is the type of patient who is admitted and the type of psychiatric facility that delivers the care (Cromwell & Maier, 2006). In 2002, 1.6 million Americans aged 18 years and older were hospitalized for a psychiatric condition, for a total of 2.2 million psychiatric admissions

(OAS, 2005; National Center for Health Statistics, 2006). These are predominately older individuals. Four of five individuals had previously been admitted, and one in eight had 11 prior hospitalizations to psychiatric facilities (Fries et al., 2006). Additionally, compared with the general population, persons with severe mental illness have a life expectancy that is 25 years less and have 1.5 to 2 times higher prevalence of diabetes, dyslipidemia, hypertension, and obesity (Newcomer & Hennekens, 2007; Miller, Paschall, & Svendsen, 2006). Higher rates of cigarette smoking, alcohol and drug abuse, poor diet and exercise habits are present in individuals who have psychiatric disorders. Thus, the complexity of the psychiatric inpatient population has greatly increased, requiring a more holistic approach and a focus on the medical as well as the psychological needs of the individual. The RN, by virtue of training and 24-hour staffing, is the discipline best equipped to provide this care on inpatient units.

The ability of psychiatric care units to provide effective hospitalizations for sick patients is critical to prevent harm by patients to themselves or others and to treat the acute phases of severe mental illness and substance abuse disorders. Continued exploration of how nurse staffing models affect patient outcomes can lead to positive organizational changes that result in safe and effective inpatient psychiatric hospitalizations and improved patient outcomes.

*Throughput.* A recent retrospective observational study also found that throughput, or patient flow, has an impact on staffing effectiveness; there was an increase in patient mortality when nurses handled multiple admissions, discharges, and transfers during their shift (Needleman et al., 2011). The same research also demonstrated that nurses' ability to safely monitor patients decreased because of high workload and low staffing levels; the resultant reduction in surveillance correlated with an increase of mortality rates (Needleman et al., 2011).

In addition, high nurse workloads increase the risk and number of reported on-the-job injuries (back injuries, needle sticks and stress-related disability), potentially resulting in high levels of nurse burnout and increased staff turnover (Clarke & Donaldson, 2008). Balancing nursing skill, experience, and education with various patient needs further complicates formulating acuity-adjusted staffing.

*Financial.* Quality and safety are of utmost concern, but a nurse leader must also be aware of the financial impact that a staffing model has on the viability of the organization. Research on the impact of staffing on financial outcomes is sparse and even sparser when the focus narrows to psychiatric inpatient units. Several studies demonstrated that a greater RN-to-patient ratio resulted in a decreased length of stay (LOS) in medical-surgical units (Unruh, 2008; Thungjaroenkul, Cummings, & Embelton, 2007). These data suggest associations between staffing,

quality, and financial impact on psychiatric services. If a psychiatric unit has adequate staffing, nurses should be able to decrease the LOS and thus shorten the wait time of psychiatric patients in the emergency department (ED) and in the medical units waiting to transfer to psychiatry. This will result in opening medical and ED beds that can be filled with other patients, thus increasing hospital revenue. In addition to revenue generation, it will result in patients being admitted faster to more appropriate treatment environments.

The relationship between staffing and downstream financial benefits is an area that needs further study. Turnover is less in hospitals with a greater number of RNs to patients (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002). It is estimated that replacement of an RN can exceed $60,000 per nurse; thus by decreasing turnover, the cost of recruitment and retention is reduced.

Another issue is skill mix. A common management strategy for cost savings is to deskill the workforce. The rationale for this strategy is that nurses are more expensive and less available for hire than are mental health workers or mental health technicians. These decisions are not based on empirical indicators of quality and safety and are not supported by research. Higher numbers of RNs have been shown to decrease adverse outcomes in patients, decrease LOS, and reduce staff injuries and patient injuries, all of which result in costs savings for hospitals.

*Technology.* Psychiatric hospital environments are becoming increasingly complex. Multitasking is common practice as staff RNs attempt to meet the day-to-day workload demands and expectations to deliver safe, high-quality patient care. In a study of more than 200 medical-surgical patient care units across the country, direct-care RNs identified 327 workflow issues and 766 unique processes as part of nursing care delivery (Bolton, Gassert, & Cipriano, 2008). These represented eight major workflow categories: admission-discharge-transfer (ADT), communication, care delivery, medication, documentation, patient movement, management of supplies and equipment, and care coordination (Bolton et al., 2008). These authors contend that implementation of appropriate and well-designed health information technologies (IT), such as the electronic health record (EHR), can help streamline complex and redundant nursing workflow processes that will ultimately transform nursing care delivery and alleviate some nurse staffing and workload issues in the inpatient setting. However, only 56 (approximately 1%) of more than 5,000 U.S. hospitals that operate in paperless environments have achieved best-practice designation for implementation of the EHR (Healthcare Information and Management Systems Society, 2011). California hospitals in various stages of EHR implementation, report nursing care hours had actually increased by 16% to 19% in the advanced stages of implementation (Furukawa,

Raghu, & Shao, 2010). Although health policy makers and health IT experts promote the widespread adoption of EHR because of its potential benefits to improve the delivery of health services and overall quality of care (Blumenthal et al., 2008), it is imperative that hospital and psychiatric nurse administrators also value a health IT system that supports nursing care delivery. Simply put, if the EHR does not work for the nurses who provide patient care, it will not work for the patients (American Nurses Association, 2011, April). As the development of these systems moves forward, their impact on staffing, particularly increases in nursing workflow, must be considered.

## Staffing plans

To ensure the provision of safe and high quality care, direct-care nurses and nurse leadership must collaborate on the development of a staffing plan. Research indicates that to reduce the frequency of negative events and/or patient mortality, these plans must be both comprehensive and flexible in setting staffing levels at the bedside (Mark & Harless, 2011; Needleman et al., 2011). When nurse leaders are developing their staffing model, they must carefully examine multiple factors in order to arrive at the appropriate staffing levels for their unit or hospital (see Appendix A). These factors include variables in patients (severity of illness, comorbidity, homogeneity of population), throughput, staff variables (educational level, experience, skill mix), and hospital factors (technology, unit design, unit age). In addition, the nurse architects of the plan must incorporate shift-to-shift variables such as number of admissions, discharges, and transfers. Balancing these variables in a staffing plan with known quality measures makes establishing any standard staffing ratio difficult.

Typically, a nurse staffing plan is used as the foundation for determining staffing needs. This is often developed annually, coinciding with the organization's budget planning process. Staff-to-patient ratios have long been utilized to establish staffing plans at the organizational level. "Nurse staffing productivity" is often measured in nursing hours per patient day. Hours per patient day (HPPD) cannot readily be used to accurately determine nurse-to-patient ratios as this measure typically reflects the average staffing across a 24-hour period. Using HPPD formulas is flawed, because factors such as staff mix (RN versus non-RN), staff competence, mix of overtime versus regular hours, and fluctuations in the patient census are not included in the calculations of this number. Additionally, not all productive nursing hours are spent providing direct care. Nurses may be engaged in activities such as education, administration, and quality assurance. Measuring HPPD will likely result in overestimation of the actual amount of bedside care (AHRQ, 2007).

What is known about nurse staffing planning comes from studies of medical-surgical nurses in general hospitals. These studies show that factors affecting nurse staffing levels include patient acuity, diagnosis, and age. Also, the skill mix of nurses and nurse's aides, level of nurses' education, and experience level of nurses are influential. Additional factors that have an impact on staffing effectiveness in psychiatric settings include the quality of support by administration for the practice of nursing and certain types of hospital characteristics such as teaching, technology utilized, and number of beds. Research on medical-surgical nurse-to-patient staffing ratios demonstrates that better nurse staffing yields better patient outcomes, including fewer deaths. Researchers have acknowledged, however, that these are often difficult data to interpret on the level of a staff ratio system (Donaldson & Shapiro, 2010; Lang, Hodge, Olson, Romano, & Kravitz, 2004).
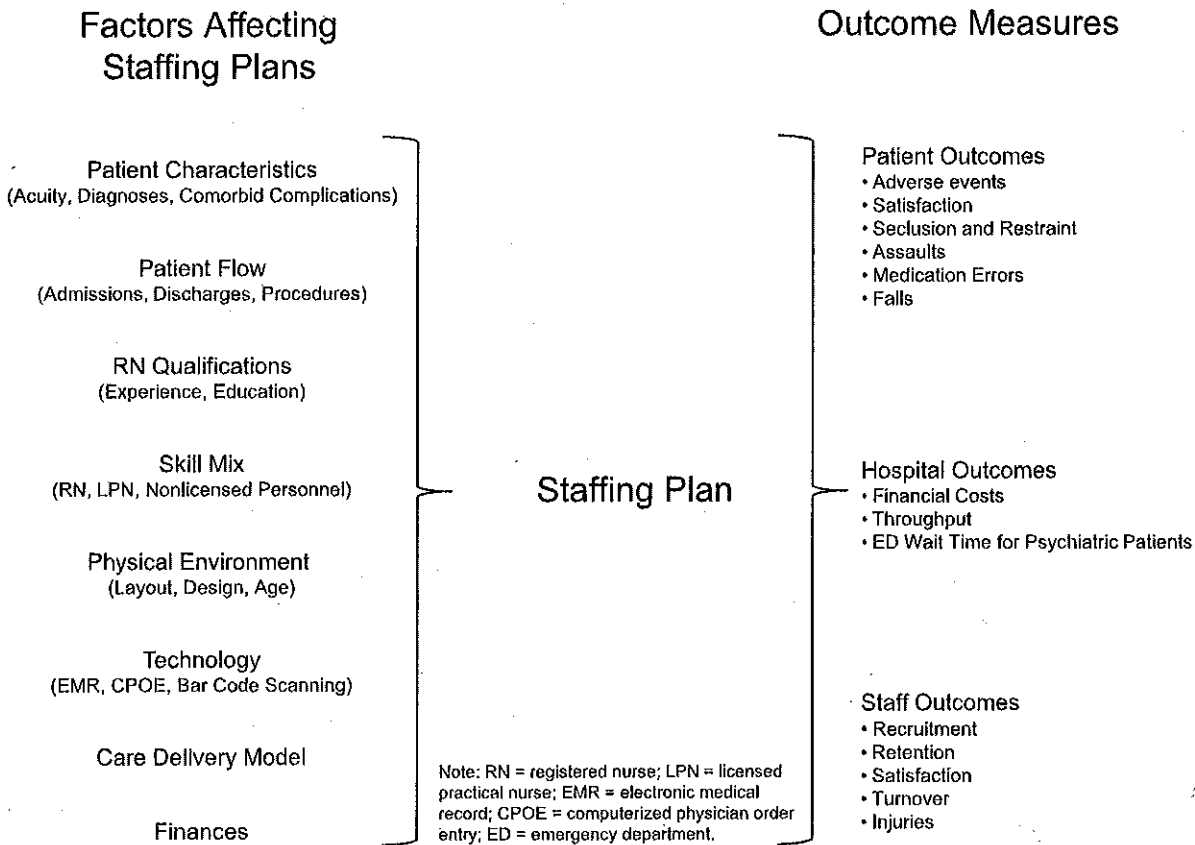
There is very little research on nursing staffing levels for psychiatric units. Researchers who have investigated the relationship between staffing numbers and effectiveness/patient outcomes on inpatient psychiatric units have concluded that the numerous variables influence any association of staffing-patient outcome (Coleman & Paul, 2001; Cromwell & Maier, 2006).

## Conclusion

Multiple, complex factors influence safe staffing levels and must be considered when psychiatric-mental health nurses initiate and implement a comprehensive staffing plan. It is the position of APNA that the likelihood of adverse outcomes increases with an increase in the number of patients assigned to each nurse. With support for the role of RNs and acknowledgment that clinical outcomes are related to nurse staffing, we propose that the following recommendations be enacted for the quality and safety of care on psychiatric inpatient units:

1. Each hospital should establish a staffing committee responsible for developing, implementing, and evaluating a safe staffing plan that incorporates specific factors for ensuring quality and safety of care. The committee will have representation from direct-care RNs and nursing administrative staff.

2. For quality and safety, staffing plans will consider the multiple variables that affect staffing needs, such as psychiatric patient complexity, nursing education, nursing skill mix, physical environment, recovery principles, and the impact of technology in use. The staffing plan should allow for shift-to-shift flexible adjustments, typically based on acuity factors, or as measured by

admissions, discharges, transfers, comorbidity of illness, and patient care complexity.

3. Specific quality and safety indicators will be utilized in the evaluation of the staffing plan. Hospitals may choose to use indicators such as medication errors, patient injury rates, staff injuries rates, seclusion and restraint rates, workers' compensation rates, staff recruitment\retention and staff satisfaction.

4. The methods used to establish safe staffing will be transparent (shared with all nurses in an understandable manner) and will reflect the staffing plan criteria for ongoing evaluation of whether a safe and high-quality patient experience is being maintained. Both the staffing plan and the evaluation of the plan will be made available to nursing staff.

5. Each hospital will put in place a process for examining staffing concerns that arise in the course of unit operations. Any actions from the examination process should be quickly enacted to ensure that safety and quality of care are maintained at all times.

6. Registered nurses should be trained to evaluate unit operations in line with identified quality measures as well as with data that assess organizational culture, such as the National Database of Nursing Quality Indicators (NDNQI) of the National Center for Nursing Quality (NCNQ).

7. Nurse-sensitive indicators, for use in defining and measuring the quality and safety of patient care, need to be developed further for psychiatric nursing. APNA should work with organizations such as NCNQ, the National Quality Forum, and AHRQ to determine these specific indicators and to disseminate innovative models for effective and safe staffing.

8. In conjunction with other national organizations and with nurse researchers, APNA should pursue studies that focus expressly on psychiatric units and hospitals. In this way, psychiatric nurse staffing can be evaluated in a manner that is well represented and on equal measure with staffing models in other hospital settings.

9. APNA will establish a work group to research the availability of a standardized acuity tool that can be modified, if needed, and implemented across psychiatric inpatient units.

10. As leaders and direct-care providers, psychiatric RNs should be acknowledged as integral partners in the institution and be authorized to develop policies on quality and safety of patient care.

## Appendix

### Factors Affecting Staffing Plans

Patient Characteristics
(Acuity, Diagnoses, Comorbid Complications)

Patient Flow
(Admissions, Discharges, Procedures)

RN Qualifications
(Experience, Education)

Skill Mix
(RN, LPN, Nonlicensed Personnel)

Physical Environment
(Layout, Design, Age)

Technology
(EMR, CPOE, Bar Code Scanning)

Care Delivery Model

Finances

### Staffing Plan

Note: RN = registered nurse; LPN = licensed practical nurse; EMR = electronic medical record; CPOE = computerized physician order entry; ED = emergency department.

### Outcome Measures

Patient Outcomes
• Adverse events
• Satisfaction
• Seclusion and Restraint
• Assaults
• Medication Errors
• Falls

Hospital Outcomes
• Financial Costs
• Throughput
• ED Wait Time for Psychiatric Patients

Staff Outcomes
• Recruitment
• Retention
• Satisfaction
• Turnover
• Injuries

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