5.6 Describe how the model of care addresses patient needs, patient population demographics, number of nursing staff members, and ratio of nurses serving in various roles and levels.

At Massachusetts General Hospital (MGH), we believe that the core value of patient- and family-centered care and the belief that the patient/family-nurse relationship is essential, are critical to the development of our professional practice model. In addition, we also believe that these values are reflected in the way we deliver care every day. The art and science of caring for patients includes a vast array of clinical and organizational activities, behaviors and processes.

The patient care delivery model is uniform across the MGH in that we deliver interdisciplinary patient-and family-centered care. However, the way this model is operationalized looks different on different patient care units caring for different patient populations. Similarly, the method for determining the number and RN skill mix of nursing units is a standard process across all units, however the internal targets selected are specific to the needs of each unit and patient population. Force 4.10 describes how trended data for midnight census, length-of-stay adjusted census, and average patient acuity (i.e., measured using the Quadramed patient classification system), are used to determine a unit workload index. Internally developed targets for hours per workload index (HPWI) are then applied to calculate the number of direct care shifts that is required in a 24 hour period. An RN mix target is used to determine the split of RN to Patient Care Associate shifts. Indirect time (e.g., orientation and education time) and benefit time (e.g., vacation and sick time) are then added to determine the full FTE budget for the unit. Customization of the process to address the specific needs of patient populations and units is accomplished through decisions regarding the HPWI and RN mix targets. HPWI targets are between 4 and 7 hours, with critical care units having a higher target of approximately 6.4 hours and general care units having a target of approximately 5.2 hours. Likewise, RN mix targets for critical care units are approximately 90% and between 80 and 85% for general care units. Nursing Directors and Associate Chief Nurses participate in these decisions to assure that the needs of patient populations and units are considered and ensured in determining the number and type of direct care staff members.

In this source of evidence, several clinical narratives will be provided to illustrate how nurses respond to specific patient needs through adjustments in staffing assignments, tapping into available resources to design processes to care for specific patient populations.

In the Bigelow 7 Gynecology/Oncology Unit, the patient population is comprised of women with gynecology issues and cancers. The narrative that follows illustrates how care is
delivered on this unit when a patient presents with a non-traditional diagnosis and, more importantly, how the staff responds to adjust staffing so the patient has the nursing attention she requires:

“Jane is a 65-year old woman with a past medical history which includes hypertension, Type II Diabetes, hyperlipidemia, and the list goes on. She came to Bigelow 7 Gynecology with a primary diagnosis of endometrial cancer for which she underwent Total Abdominal Hysterectomy/Bilateral Salpinoophorectomy (TAH/BSO). Two days after her surgery, she began having mental status changes and became increasingly agitated. Her respirations were up into the 60s, her BP 180s/100, and her HR at 170. We immediately thought it was a pulmonary embolus or MI, but soon realized the patient was detoxing. (The patient nor her family hadn’t disclosed in her history and physical and nursing assessment that she drank upwards of 10 alcoholic drinks/day).

The first nurse to respond to the family’s screams as their mother was writhing in her bed ran to the patient’s bedside immediately putting oxygen on and trying to calm her. Shortly thereafter, two other nurses and a resident joined in. We knew our first priority was to keep this patient safe, so multiple medications were given to stabilize her including Ativan, and Lopressor. Unfortunately, as soon as she would settle, it wouldn’t be long before she would get agitated again.

Demographically, this patient is typical of those we see on Bigelow 7 Gynecology/Oncology in terms of diagnosis, treatment, and acuity. It was the detoxification process that was new for us. We are very comfortable with post-op women with gynecological cancers and various complications. I for one had never seen a patient going through withdrawal. Luckily that day we were well staffed and Jane’s nurse was able to give her 1:1 attention as the rest of the Staff Nurses assisted her in caring for Jane and her other patients. It is amazing the teamwork that happens not only day-to-day, but in emergency situations. There is a mutual trust with our nursing team that made this situation manageable. I can’t imagine not having that camaraderie. That day we were also lucky to have a spectrum of nurses in terms of time served. We had two seasoned nurses and three newer nurses, and all and all, we all learned a lot that day.

The patient care delivery model at MGH provides a foundation for which nurses can base their practice upon. It gives us responsibility for the lives and safety of others as well as the responsibility for our actions and ourselves. It also grants us the ability to be proactive caregivers to our patients and take appropriate accountability for our individual practice and patient care.”

On Ellison 8, the Cardiac Surgical Step-down Unit, a new graduate nurse’s narrative describes how the model of care allowed her to fully understand the patient and family experience of
illness, to learn the clinical practice and to develop in her role as a member of an interdisciplinary team.

My name is Kate Keller, and I am a nurse on the Ellison 8 Cardiac Surgical Step-down Unit. Nurses symbolize hope; hope that healing will come and pain will go away. MGH is known the world over for its clinical excellence, groundbreaking research, and unparalleled patient care. But what the rest of the world doesn’t see is the family that exists within this institution that makes everything else work. We weave ourselves together to support and guide one another through the best of times and the worst of times. We celebrate together, and we grieve together. We teach each other, and we support each other.

Mr. T had already suffered several post-operative complications, but he remained ‘in good spirits’ as we say. On the day he was supposed to return home, he suffered a heart attack. He spent two weeks on the Ellison 8 before undergoing heart surgery that was technically a success, but the events that transpired after his surgery would challenge every resource MGH had to offer.

I met Mr. T on his first night out of the Cardiac Surgical ICU (CSICU). I was a year and a half out of nursing school and was beginning the first of a series of night shifts. Mr. T had lost one leg and was already scheduled to have his other leg amputated as a result of a rare post-operative complication. To my surprise, I found him animated and inspiring. We talked about his work, his family, his life, and his future. I immediately signed on to be Mr. T’s primary nurse by placing a magnet with my name on it next to his name on our census board. It was a simple act that would change my life as a nurse.

As a novice, there was so much I’d never seen and only read about in order to pass an exam. When Mr. T returned to Ellison 8 after his second amputation, I again placed my name next to his. As I spent Christmas with Mr. T and his family, I noticed his breathing was labored, ever so slightly. His vital signs and oxygen saturations told me he was breathing sufficiently, but I had a feeling something wasn’t right. When I returned to work days later, I was told he had suffered from respiratory distress requiring re-intubation. Over the next week he would have a tracheotomy for failure to wean off the ventilator. I always wondered if I had missed something. Should I have seen something that could have prevented these events?

I had taken respiratory care classes here at the hospital. I had spent time in the CSICU with a Respiratory Therapist learning about ventilators and suctioning. When Mr. T returned to Ellison 8, so did my name next to his on the board. I leaned on more experienced clinicians to help me cope with my fears about the new machine. They taught me what to look for should there be an issue with the machine. As a team, we developed a plan to help Mr. T wean off the ventilator. Every day he would scribble on a piece of paper, “I want my voice back.” Every day we worked to make it happen. When he finally was successfully weaned, I was taken aback by the sound of his voice. I had become accustomed to acting out charades, deciphering his drawings, and using the cue cards we made with his 15-year-old daughter. I was
constantly learning about respiratory care and syndromes, tracheotomies, feeding tubes, and how to help a family cope in such a rare and unimaginable situation. My circle of resources began to include Physical Therapists, Occupational Therapists, Speech-Language Pathologists, Nutritionists, and Social Workers.

Every time one obstacle was cleared, a new one appeared. As a team, we weaned Mr. T off the ventilator to a trach mask and eventually a trach button. Soon, he was fit for a prosthesis. His already complex discharge planning had begun when Mr. T suffered a GI bleed requiring another trip to the ICU.

Upon his return to Ellison 8, he required intense pulmonary care once again, but this time I knew what to do. I began sharing the information I was learning with other nurses on the unit and teaching them my newfound techniques and skills.

Mr. T had a total of six readmissions to the Cardiac Surgical ICU for respiratory distress, GI bleeding, infections, and even partial sternum removal. Being uprooted to a new environment seemed to take a mental and spiritual drain on him and his family. As a team, we determined that we’d try to do whatever it took to keep him on Ellison 8 until he was ready for discharge. We met weekly as a multidisciplinary team to set new goals: keep his heart healthy with electrolytes and close cardiac monitoring; keep his wounds clean and dry; and continue with intense pulmonary, physical, and occupational therapy.

Then came Mr. T’s biggest setback of all. I called the Physician’s Assistant caring for Mr. T to assess and confirm what felt like impending doom. His breathing was slow and shallow, his color was ashen, and his heart rate hovered at around 150 beats per minute. His blood pressure and urine output were dropping rapidly. Something had to be done. This is what we’d been preparing for. We called the Attending Physician and Respiratory Therapist.

Attempting to remain calm and remember all I had learned in the last several months, I went into action. I moved tables to allow the ventilator to fit easily. I piled suction tubing, IV fluids, and emergency medications and carefully placed them in his room while we waited for the rest of the team to arrive. My Resource Nurse asked how she could help but gave me the nod letting me know she had confidence in my ability to handle the situation and call for help if necessary. I delegated the care of my other patient and turned my focus to Mr. T. The situation was grave. The interventions necessary were usually performed in the ICU, but we wanted to keep Mr. T with us if at all possible. The environment was controlled. We could do it, but we had to do it together.

We placed Mr. T on a ventilator and started Neosynephrine after exhausting all other options. He stabilized, and we started antibiotics. Over the next few days the team met to discuss options. Every day was more intense and exhausting. Finally, the antibiotics started working. The medications were weaned, and his respiratory status improved. I know I could not have contributed in such an emergent situation without my colleagues and the resources and teaching they had provided in the preceding months.
The recovery Mr. T made in the months after that fateful week was remarkable. His nutrition slowly improved. His pulmonary status recovered and his trach was removed. His mental status declined, but his personality was still apparent. Nurses and volunteers took him outside on warm days, listened to his favorite show, Prairie Home Companion, on the radio, and celebrated his birthday on the unit. Case Managers worked relentlessly to find a suitable rehabilitation facility for Mr. T.

On the six-month anniversary of my introduction to Mr. T, I discharged him to rehab. The hallways of Ellison 8 were lined with people who had taken care of him or heard his incredible story. Mr. T left us with a big smile and two thumbs up.

The lessons I learned from Mr. T and my colleagues are invaluable. My clinical knowledge has advanced in every area of my practice. My assessment skills are more acute and focused. Prioritization and organization are still improving. More importantly, I learned how to holistically care for my patients and my colleagues. I learned about the power of hope and the importance of support for patients, families, and staff. I learned to be creative with the care of my patients and to adapt to unexpected changes. I know I am a better nurse and a better person today, not just because of Mr. T, but also because of the family of colleagues that helped me learn and care for him every day.