

**Nurse to Patient Ratios: Significance in Healthcare**

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Patient safety and positive patient outcomes are major goals in the healthcare field. Recently, there has been some debate on mandatory nurse to patient ratios (NPR) and how these policies can impact patient safety and health outcomes. For example, in 2018 Massachusetts constituents voted whether or not to enforce government regulated nurse to patient ratios. This vote attempted to model a similar legislature that had already been put into place in California, “Hospital nurse staffing ratios mandated in California are associated with lower mortality and nurse outcomes predictive of better nurse retention in California” (Aiken, 2010, Discussion section). After much debate by nurses, patients, and healthcare faculty the vote did not pass in 2018. The vote considered both workloads for nurses and the importance of safety and positive health outcomes for patients. Castillo (2019), the executive director of National Nurses United is concerned that “...in 49 states, it’s perfectly legal for health care employers to boost profits by saddling one nurse with more patients than she can safely care for at once (p.15). Across the healthcare system, patient safety is a major concern. Some believed that if the government controlled nurse to patient ratios, then this blanket policy would not take into account the specificity of each healthcare center and put patient’s care in jeopardy. On the other hand, some argue that a smaller number of patients per nurse would increase patient safety because care would become more individualized. The vote on nurse to patient ratios gave lawmakers and professionals in the healthcare system a reason to begin to reevaluate patient safety and outcomes.

Safety of patients is a top priority for nurses. One side of the topic argued that if a nurse has less patients, than his/her care can become more focused which may decrease patient falls or incidents. According to some, Nurses/midwives are still having to take more patients than they can safely care for. They still find themselves forced to sacrifice patient care and doing so is

challenging professionally (McKlevie, 2018). If a nurse is overloaded by patients, he/she is less likely to have time to notice when something may potentially go wrong which can lead to negative patient outcomes. If nurses become overwhelmed with too many complex patients on their assignments this puts the patients at risk. Therefore, a change in legislation would assure that facilities would follow a set standard of nurse to patient ratios in order to protect their patients from unintentional harm or death.

The “Graying of America” also plays a significant role in this debate. People are living longer due to advances in medicine and technology, so therefore they are requiring more complex care for longer periods of time. The United States’ baby boom is also a key factor in this “graying” because it increased the number of births during a short time period. These “babies” are now becoming older adults and are contributing to an increase in elderly population in the United States who require more healthcare needs for a longer time period. In the U.S., the expanding population is reaching old age more rapidly than in most of the rest of the world, largely because the baby boom of 1946-1964 produced a large bump in population. Over the next two decades, the rate of increase in the elderly population will be over 3% per year. (Sade, 2012). Advances in healthcare and technology are incredible and help make the United States a safer place to live, but this also puts a strain on the already populous healthcare system. The healthcare industry is expected to create more revenue and have faster patient turnout with more patients, and this risks patient outcomes. Unfortunately, nurses are taking the hardest hit with a booming healthcare system. They are the professionals asked to take on more patients and are expected to provide effective, quick, and individualized care.

Mandated nurse to patient ratios can also negatively impact patients on the other side of the debate. One idea behind this is that mandated ratios will put a strain on the healthcare system

itself and cause a deterioration in efficiency of care for consumers. This may create other issues that could hinder certain populations from receiving care. For example, opponents of the ballot measure contended that among potential consequences would be increased ED (emergency department) wait times, reductions in opioid treatment and mental health services, and possible closure of some community hospitals (Sofer, 2019). Additionally, nurses would have less of a say in their patients care because the vote would relinquish their authority to make individualized decisions for their patients. The rigid, one-size-fits-all approach proposed by the ballot initiative failed to acknowledge the complexities of staffing and undermined nurses' professional autonomy and decision making in determining staffing on their units (Sofer, 2019). Nurses are directly impacted by this vote and some were split on the decision about whether or not this change in legislation would be beneficial or detrimental to patient outcomes.

### **Statement of Problem**

According to literature, there is a problem facing the healthcare system right now regarding safe nurse to patient ratios. Some say that government regulated nurse to patient ratios will help improve patient safety and therefore improve overall nursing care. However, there is also the argument that enforcing nurse to patient ratios through legislation will act as a blanket solution that is not tailored to each individual facility and will negatively impact consumers of healthcare through longer wait times and less accessibility. The literature discussed patient safety a great deal when explaining nurse to patient ratio. Also, patient outcomes were a topic discussed in the literature because this type of data determines whether or not healthcare facility or system is working effectively. If there are more negative patient outcomes, which means patients are impacted negatively related to the care they receive, than positive patient outcomes, then a change needs to be enacted as soon as possible to protect patients and improve their care. A third

major theme found in the literature is patient feelings towards mandated nurse to patient ratios and how that will impact their care if they are in need of medical services. In order for the healthcare system to be deemed effective patient attitudes towards care need to be favorable, patient outcomes need to be positive, and patient safety needs to be a priority.

### **Background and Need**

Government mandated nurse to patient ratios can both negatively and positively impact patient safety and positive patient outcomes. It is clear that increased demand on nurses may cause more negative outcomes of patients overall. This may be due to an increased workload for nurses and the lessened ability to provide individualized care because of mandated ratios. The literature suggests some solutions for addressing nurse to patient ratios and their consequences. For example, instead of mandating government regulated nurse to patient ratios it would be more beneficial to have the individual facility nurses make the decisions to regulate the nurse to patient ratio. According to Tevington (2011) the American Nurses Association advocates legislation that will empower nurses to create valid, reliable unit and patient-specific staffing plans, and require public reporting as outlined in The Registered Nurse Safe Staffing Act. Another potential solution to this issue would be to enact a program that monitors the safety and outcomes of patients in facilities where nurse to patient ratios are implemented in order to confirm if the mandated ratios are working. Further research needs to be done in order for consumers of healthcare and professionals in healthcare to decide what would be the best fit for their state. The goal is to improve positive patient outcomes and improve overall safety of patients that are being cared for. A final solution to this problem would be to look at data from other states who may have already implemented this legislature. A meta-analysis of some sort comparing state by state legislature and outcomes would either confirm or deny the effectiveness of a state mandated

nurse to patient ratios.

### **Purpose of Study**

Studying the impacts of these ratios will help decide whether enacting mandated nurse to patient ratios would improve patient outcomes and safety. Some potential solutions are to have the individual facility nurses make the decisions to regulate the nurse to patient ratio based on their individual facility and on how they see fit, enact a program that monitors the safety and outcomes of patients in facilities where nurse to patient ratios are implemented in order to confirm the data and make a solid argument for or against this legislation, and to look at data from other states who may have already implemented this legislature. All of these solutions are based on individual facilities, research, and carefully analyzed data. The study would involve an in depth look at the circumstances surrounding negative outcomes including sentinel events, near miss events, serious incidents, failure to rescue events, and service occurrences. It would also include a study of these same events in places where mandated nurse to patient ratios has been implemented to compare the data of both scenarios. This would uncover if enacting the ratios is beneficial to patients and staff or not. This study would collect data from a facility where nurse to patient is not enacted and a similar facility where mandated nurse to patient ratios have been enacted. This data would have to be collected at several sites both with and without nurse to patient ratios in order to generalize the data. An expected outcome of this study would be a clear representation of both sides of the debate and a determination of what the best practices would be in order to improve patient safety and boost positive patient outcomes in regard to nursing practice.

## **Research Questions**

There are many possible research questions that could be discussed involving nurse to patient ratios as they pertain to patient safety, positive patient outcomes, and overall quality of care. One potential question would be, “Are nurse to patient ratios significant to the overall well-being of patients and their care?” Answering this question is important because patient safety is the number one overall goal in healthcare. Another research question that is related to this topic is, “What are the impacts of low or high NPRs?” Without a healthcare environment based around safety, the care given to each patient is essentially irrelevant. As healthcare providers and workers, it is our job to keep the patients safe while they receive care. It is important to determine the significance of nurse to patient ratios to see if mandated ratios are relevant to the current issues in the healthcare system.

## **Significance of Testimonials**

The possible contributions that this study will make to the healthcare field are important to consider when discussing the study as a whole. This study attempts to examine data collected at healthcare facilities that have implemented a mandated nurse to patient ratio, whether that is state mandated, or facility mandated, and collect data in healthcare facilities that have not implemented a mandated nurse to patient ratio. The purpose of this data collection is to determine the effect of implementing nurse to patient ratios in order to determine if this plays a role in impacting positive patient outcomes and patient safety. Once analyzed, the data from this study could be used as evidenced based practice to either implement mandated nurse to patient ratios or to get rid of them. This could finally settle the argument on if there should be a nationwide vote to enact nurse to patient ratios at the governmental level.

The benefits of this would be that if mandated nurse to patient ratios are in fact proven to improve patient outcomes and overall patient safety, then better quality and more individualized care can be given nationwide. This would benefit the nurse, the patients, and overall the consumers of healthcare who will receive quality of care for the money they spend to cover healthcare expenses. This could result in less nurses becoming burnt out, less errors related to fatigue, and more focused staff who are able to provide better quality care to all of their patients because they have the time to do so. It also benefits the patients who then may have a less likely chance of needing to return to the hospital with complications or have complications that could have been avoided while still admitted to the hospital.

### **Operational Definitions**

Near Miss: an event that might have resulted in harm, but the problem did not reach the patient because of timely intervention by healthcare providers. (CMPA Good Practices Guide)

Sentinel Event: any unanticipated event in a healthcare setting resulting in death or serious physical or psychological injury to a patient or patients, not related to the natural course of the patient's illness. (The Joint Commission)

Patient Safety: the prevention of errors and adverse effects to patients associated with health care. (World Health Organization)

Positive Patient Outcome: in health care, the remediation of functional limitations or disability; the prevention of illness or injury; or an improvement in patient satisfaction. (Free Medical Dictionary by Farlex)

Negative Patient Outcome: any adverse response to a therapeutic intervention. (Free Medical Dictionary by Farlex)



Serious Incidents: adverse events, where the consequences to patients, families and caretakers, staff or organizations are so significant or the potential for learning is so great, that a heightened level of response is justified. (NHS England)

Failure to Rescue: a failure to prevent a clinically important deterioration, such as death or permanent disability, from a complication of an underlying illness or a complication of medical care. (AHRQ PSNet)

### **Limitations**

Limitations are important to discuss in all research studies. One possible limitation would be the number of participants. The smaller the sample, the less generalizable the findings are. Another possible limitation would be relying on any previous data analysis on this topic is difficult because there is a lack of it available. This topic has not been heavily studied statistically, so finding valid and reliable patient questionnaires, reports on safety issues or negative outcomes may be difficult. Another possible limitation could be time and resources because longitudinal studies would need to be done to determine the outcomes of patients over a period of time, but they cost more money because they take more time to perform. A third possible limitation could be that all data relies on previous data analysis related to this topic. This is difficult due to the lack of data available. A fourth possible limitations would be finding unbiased literature due to the fact that this issue became highly publicized related to the vote in Massachusetts. This means that finding objective evidence would be challenging. Finally, conditions set by the researcher might influence the studies if nursing staff know that their outcomes are being monitored.

### **Ethical Considerations**

Ethical considerations are often discussed heavily when studies pertain to healthcare related topics. All patient information would be kept confidential and anonymous by the retraction of any patient identifiers including but not limited to names, birth dates, specific admission dates to specific hospital names and units. All HIPPA rights would be protected and any possible identifiers would be redacted from the results of the study. This study would also be based solely on collected data and would not directly influence the course of treatment or outcomes.

### **Literature Review**

Across the healthcare system, patient safety is a major concern. Some believed that if the government controlled nurse to patient ratios, then this blanket policy would not take into account the specificity of each healthcare center and put patients care in jeopardy. On the other hand, some argue that a smaller number of patients per nurse would increase patient safety because care would become more individualized. Safety of patients is a top priority for nurses. One side of the topic argued that if a nurse has less patients, than his/her care can become more focused which may decrease patient falls or incidents.

The literature review will address three areas related to nurse to patient ratios. The first section address research related to how NPR's are related to the historical context called the "Graying of America" and how American nurses are responding to this influx in patients. The second section will address research related to the relationship between NPR's and the quality of care they receive which includes their safety. Finally, the third section will be related to NPR's and patient health outcomes.

### **Presenting the Issue in Historical Context**

Sade (2012) did not specifically focus on nurse to patient ratios, but instead focused on the graying of America that has caused an influx of patients being admitted to the hospital. This increase in hospital admission and advanced age of hospital admitted patients increases the demand on nurses and on their workload because this population is living longer and requiring more complex care in the hospital setting. This affects the ratio of nurse to patients and therefore is an influential factor affecting nurse to patient ratios. There is no sample size noted because this is not a focused study, but instead an explanation regarding the aging population in The United States and how this affects the healthcare system in relation to nurse to patient ratios. This source focused on statistical data collection.

Sofer (2019) explained that the expanding population in the United States is reaching old age more rapidly than in most of the rest of the world due to the baby boom of 1946-1964 that produced a large bump in population. This article explains that over the next two decades, the rate of increase in the elderly population will be over 3% per year. This affects nurse to patient ratios as it pertains to the graying of America. An increase in the elderly population causes more of a demand on nurses to provide more complex care to more patients during each shift. This poses a challenge for nurses that are working with no limit on nurse to patient ratios which can cause inadequate care and negative patient outcomes. The setting of this article is in New England during the time of the Massachusetts nurse staffing vote and the purpose of this article is

to explain both sides of the vote in the perspective of nurses. The data is based on statistics and professional opinions of both arguments.

Tevington (2011) explained that the American Nurses Association advocates for legislation that will empower nurses to create valid, reliable unit and patient-specific staffing plans, and require public reporting as outlined in The Registered Nurse Safe Staffing Act. Shindul-Rosthschild (2003) discusses the importance of having governmental support on issues related to nurse to patient ratios, "...safeguarding the public is an essential role of government. In my view, when lives are at stake, leaving the numbers of RNs at the bedside to the whims of individual hospitals, especially those driven by profit, is a recipe for disaster" (p.46). This reiterates the importance of governmental support on staffing policies in acute care settings. This is vital to prevent negative patient outcomes and improve the overall safety of each patient cared for in a hospital setting. The data of this source is based around statistical analysis of current nurse to patient staffing in hospitals around The United States. The conclusion of this article discusses that the passage of a bill relating to nurse to patient ratios would promote the value of the nursing profession and facilitate evidence-based practice. In addition, it would also allow nurses to utilize their knowledge, expertise, and skills to provide effective care. Researchers and nurses agree that having a regulated nurse to patient ratio plan provides consistency throughout the healthcare system. This avoids one hospital implementing one plan for staffing while another hospital implements their own plan (Trossman, 2016).

### **Patient Safety and Quality of Care**

Allen (2012) explored different aspects of the nurse-patient assignment purpose and how this pertains to patient safety as a whole. All of the conclusions were well thought out and

reasonable when discussing how important nurse assignments can be and therefore how vital nurse to patient ratios are when talking about the safety of patients. This study explored and described the nurse-patient assignment process. The setting of this study was in a Southeastern community hospital in the United States. The 412-bed hospital is the flagship for six local community and urgent care centers, an extended care facility, and an Alzheimer's Care Center. Relevance sampling guided the selection of 14 charge nurses from the five nursing directorates for the 11 study units. Specifically, charge nurses were selected because they made nurse patient assignments in the hospital. The methodology of this study was through interview data analysis. The conclusion of this study was that research on staffing and nurse-patient ratios addressed the effect of staffing on patient outcomes, but with the continued nursing shortage nurses needed to be better utilized in order to affect safety and patient outcomes.

Buckley (2004) focused specifically on quality of care as it relates to patient care when discussing nurse to patient ratios being a direct result of a payer mix. This source found its data by looking more at the cost related data and how quality of care can be influenced by nurse to patient ratio as well as how these ratios could potentially affect patient outcomes. The intervention used to collect data in this study was statistical analysis of patients with varying levels of health insurance. The sampling was from fourteen charge nurses representing 11 nursing units of a suburban hospital in the Southeastern United States. They were interviewed using a semi-structured interview guide. Overall, the results of this study were that participants across units strove to make nurse-patient assignments where best care was a priority while ensuring that nurses were treated equitably, and the work of the unit was completed. This is ideally what every nursing facility should strive for, but it is clear for Buckley (2004) that regulated NPRs provide the best care for patients.

Kim et al. (2019) explained that the objective of the study performed was to investigate both individual and organizational factors influencing the falls of patients in hospitals. The conclusion of this study showed that an adequate level of nursing staff is an essential factor influencing the number of patients falls in the hospital setting. The methods performed for this study were that this study retrospectively reviewed patient data and analyzed factors influencing patient falls using a mixed-effect model. The conclusion of this study explains that since the number of patients falls in an acute-care setting might increase in the future because of the growing elderly population, we should consider these risk factors for falls and construct preventative programs accordingly. Along with Kim et al. (2019) Schmalenberg and Kramer (2009) found that nurses' perceptions of staffing adequacy were most influenced by having enough staff to provide safe, high quality care while ensuring nurse satisfaction with the care provided. Researchers agree that implementing regulated nurse to patient ratios would benefit the safety of patients overall.

McKlevie (2017) described how nurses/midwives are still having to take more patients than they can safely care for which puts patients at higher risk of complications. They still find themselves forced to sacrifice patient care and doing so is challenging professionally because the goal of any nursing staff is to keep their patients safe and well cared for. Limited nursing staff means higher nurse to patient ratios which can lead to a lack of proper care techniques related to time constraint and workload. This source is a socially constructed analysis based on personal work experience and statistics with no set setting or sample, but instead based on information expressed by nurses. The overall intention and conclusion of this article is to identify new knowledge and new opportunities for all involved in safe staffing.

### **Nurse to Patient Ratios and Patient Health Outcomes**

Butler (2011) wrote a dissertation about how in healthcare staffing ratios specifically affect patient outcomes. This is vital because it explores the specific topic of patient outcomes related to nursing ratios and not just safety. Positive patient outcomes are an important part of care planning and the nursing process, so it is important to include these statistics when relating to nurse to patient ratios in order to see a complete picture of overall patient care. The methods used by this author were chosen in order to estimate the impact of the mandated nurse-to-patient ratio in Arizona ICUs. The author employed a difference-in-differences estimation strategy to compare the nurse-sensitive dependent outcomes for ICU and non-ICU patients. The binary dependent variables are estimated using a linear probability model. The setting of this study was healthcare institutions in the state of Arizona. The conclusion of the study showed evidence suggesting that the regulation was binding on nurse staffing levels, so that the post-ICU coefficients represent estimates of the marginal improvement in health generated by an incremental increase in nurse staffing levels.

Koutlay (2018) discussed how there is conclusive evidence on the effect of nurse staffing ratios on nurse-sensitive outcomes (NSOs) has not yet been achieved worldwide. The aim of the study that was conducted was to describe the relationship between nurse staffing and NSOs at a Magnet designated, university hospital in a low-income country. The methods of this study were done by performing a 48-month prospective study assessing the relationship between nurse staffing and six patient outcomes in medical surgical units and critical care units. Nurse staffing was measured by nursing hours per patient day and skill mix, whereas patient outcomes were total falls and injury falls per 1,000 patient days, percent of surveyed patients with hospital-acquired pressure injuries, catheter-associated urinary tract infections, ventilator-associated

pneumonia, and central line- associated bloodstream infections per 1,000 central line days. The conclusion that this study drew was that the odds for total falls, injury falls, hospital acquired pressure injuries, and central line associated bloodstream infections in the medical surgical units were higher with lower nurse staffing.

Needleman (2020) examined the association of inpatient mortality with patients' cumulative exposure to shifts with low registered nurse (RN) staffing, low nursing support staffing, and high patient turnover. The methods of performing this study was through a secondary data analysis that included cumulative counts of exposure to shifts with low staffing and high patient turnover were used as time, varying covariates in survival analysis of data from a three campus US Academic Medical Center for 2007– 2012. The overall conclusion of this study was that low RN and nursing support staffing were associated with increased mortality. The results should encourage hospital leadership to assure both adequate RN and nursing support staffing. Garnett (2009) agrees that staffing ratios directly affects patient outcomes. Negative outcomes have been found throughout the literature as a result of unregulated nurse to patient ratios.

Shin et al. (2018) explained that although there has been a great number of studies that have been conducted to examine the relationship between nurse staffing and patient outcomes, none of the reviews have rigorously assessed the evidence about the effect of nurse staffing on nurse outcomes through meta-analysis like this study does. The methods of this study included gathering together published peer-reviewed articles published between January 2000 and November 2016 were identified. The study findings demonstrate that higher nurse-to-patient ratio is related to negative nurse outcomes. Future studies assessing the optimal nurse to patient ratio



level in relation to nurse outcomes are needed to reduce adverse nurse outcomes and to help retain nursing staff in hospital settings.

Welton (2014) explained how there have been many studies that have examined the relationship between nurse staffing levels and clinically relevant outcomes such as unexpected mortality, infections, pressure ulcers, hospital length of stay, and patient injuries. Despite research findings, there is little consensus on what constitutes an adequate nurse staffing level and how staffing patterns are associated with outcomes of nursing care. The article also goes on to talk about how critical care outcomes can be measured in relation to nurse to patient staffing ratios. The methods of this particular article were an interview done as an editorial of the opinion of a senior nurse working in the healthcare field. The conclusion of this article explains that the Massachusetts new nurse staffing law will provide insight how to implement acuity-based staffing and public reporting of outcomes for critical care units if it had been implemented after the vote two years ago. Additionally, a hospital unit can be a very hectic place, so it is not surprising that when there is not enough staffing to complete tasks, then some tasks get done in a half hazard manner. Along with Welton (2014), Hill (2017) explains that nurse staffing directly effects medication errors in the hospital setting, "...medication errors and other recognized failures have a huge impact on costs in hospitals, not only through litigation but also because of the cost of dressings, medications and rehabilitation" (p.704). This is even more true for critical care units because more medication is administered.

### **Argument**

The literature on NPRs suggests that government mandated staffing ratios will increase patient safety and decrease negative patient outcomes while not implementing these regulations

could have detrimental effects on patient safety and outcomes. The first area of literature deals with the “Graying of America.” Specifically, Sade (2012) points out that, “By 2030, the rate of population growth related to the baby boom will level off, and by then, about 20% of the U.S. population, 72 million people, will be over the age of 65 years” (p.8). This is an increase of 3% in the elderly population annually (Sofer, 2019). Both of these statistics mean that a large percentage of the population will be the most vulnerable to disease/illness and therefore hospitals will see an increase in admissions. With that being said, having NPRs in place would accommodate this influx to make sure that this population is well cared for.

Next, it is important to get insight from nurses while proposing NPR legislation. Specifically, in the Registered Nurse Safe Staffing Act there is a component that includes, “...of the bill require staff nurses to be involved actively in the development of unit-based staffing plans” (Tevington, 2011, p.267). This means that there is evidence of current nurses who want to be involved in staffing protocol. In order for their involvement to be solidified legislation would have to be involved. They want mandated NPRs and the Registered Nurse Safe Staffing Care Act is one example of this. Shindul-Rosthchild (2003) adds that nurses need governmental support in order to get legislation passed. Governmental support would provide consistency for all nurses throughout a certain region or state (Trossman, 2016). This would make a measurable difference in terms of patient care because consistent care is better care. It is obvious that the combination of the “Graying of America” and nurses rallying for mandated NPRs puts this issue as a top priority in the healthcare system.

The second area of literature addressed patient safety and quality of care. Specifically, that with mandated NPRs patient safety would improve. In Allen (2012), the researcher found

that “Nurse-patient assignments that furthered continuity of care through sustained nurse/patient matches and patient advocacy contributed to furthering ‘best care.’ For these charge nurses continuity of care was the ongoing assignment of the same nurse to the same patient.” This means that there is evidence supporting mandated NPRs in real life applications. Assignments directly affect NPRs because the assignments are given out based on staffing ratios for the shift. Allen (2012) concluded that, “Findings indicated that ‘best care’ was the overarching purpose of the nurse patient assignment process” (p.78). Part of this process included NPR assignments which improved the best care model.

Kim et al. (2019) researched patient fall rates in different hospitals with different staffing ratios. One major finding of this study supports the implementation of mandated NPRs. Specifically, in general hospitals where staffing was low with a ratio of 1:10 there were more falls compared to tertiary hospitals with more staffing and a lower ratio of 1:6. Patient safety includes keeping patients from falling and in this study it seems that the staffing ratio may have directly affected falls rates. Schmalenberg and Kramer (2009) discuss a specific critical care unit where NPRs are not mandated, and this began to impact patient safety. For example, the number of critical care nurses on the unit was cut back and nurses on this unit were also responsible for being apart of the hospital’s code team. This means that any time a code is called then most of these nurses had to leave their patients with the other nurses on the unit. Although codes are important to respond to, these patients were left with less nurses than could properly care for them. Schmalenberg and Kramer (2009) believe that working in nurse council meetings to mandate NPRs may improve overall patient safety and avoid nurses being called away from their assigned unit. McKlevie (2017) continues this argument for mandated NPRs, “an accurate and effective investment in safe staffing is what will make a tangible difference to workloads and

patient safety and outcomes” (p.21). This means that there should be mandated NPRs because McKlevie (2017) supports this legislation based on a unit created to address safe staffing ratios in a hospital.

The third area of literature that supports the argument for mandated NPRs deals with patient outcomes. Koutlay (2018) found, “Total patient falls, injury falls, the prevalence of HAPIs [hospital acquired pressure injuries], and CLABSIs [central line associated bloodstream infections] were significantly related to lower NHPPD [nurse hours per patient day] rates in both the medical–surgical and CCUs” (p.356). For example, per 1000 patient days there were 42 falls recorded when staffing was considered low and only 9 falls when staffing ratios were high. This means that NPRs were a factor in keeping patient’s safe from falls. Needleman (2020) reported on mortality rates of patients with low staffing rates. For example, “...of low RN staffing was associated with an increased hazard of mortality, a 2.3% increase in the hazard when the count of low RN shifts was extended over the whole admission and 9.1% when the count was restricted to the second to fifth days of the admission” (p.14). This means that in hospitals where nursing staff was decreased significantly during a patient’s admission meant a higher risk of mortality. This supports the mandating of NPRs in order to save lives.

Shin et al. (2018) conducted a meta-analysis exploring the relationship between nurse staffing and nurse outcomes. Specifically, Shin et al. found, “Higher nurse to-patient ratio was consistently associated with high degree of burnout among nurses. An increase of one patient per RN ratio was associated with a 7% increase in the odds of burnout” (p. 279). This means that nursing care is put in jeopardy when nurse to patient ratios are not regulated and mandated. A

significant amount of nurse burnout can put patients at a higher risk of negative outcomes related to their care during admission. This further shows the need for NPRs in the healthcare system.

Welton (2014) outlined the 2014 bill in Massachusetts supporting government mandated NPRs. Specifically, Welton (2014) describes that in, “A recent European study conducted across 12 countries. . . reported a range of nursing care missed during high workload shifts such as adequate patient surveillance (27.2%), administering medications on time (19.4%), and pain management (10.0%). For example, if antibiotics are not given on time, patients may receive a subtherapeutic or toxic dose of the drug leading to ineffective treatment of a life-threatening infection” (p. 554). This means that there is a push by political leaders to implement mandated NPRs because patient lives are at risk. Hill (2017) adds to this through discussion of costs when medication is maladministered related to short staffing ratios. The cost of implementing mandated NPRs is far less than the cost of hospital litigation due to these errors.

Overall, to ensure patient safety and positive health outcomes healthcare facilities should implement mandated nurse to patient ratios. The current literature on nurse to patient ratios supports nurse to patient ratios that are mandated because without being mandated, many places would tend to lean towards not implementing these safety strategies due to an increased cost. The Health Policy Commission (2018) found, “Hospitals could see potential savings of between \$34 and \$47 million because of reduced adverse patient safety incidents and reduced hospital length of stay because of higher quality care.” This means that there are some potential cost benefits if mandated NPR’s are implemented. The cost of litigation on the other hand is high. Mello et al., (2010) found that annual medical liability system costs are estimated to be \$55.6 billion. Although this figure is from 2008, the costs are still high and relevant in today’s economy. The research studies show an overwhelming support of the implementation of nurse to patient ratios

based on statistical data and interviewing. All of this literature supports the implementation of nurse to patient ratios because statistics show a correlation between safe staffing levels and positive patient outcomes.

### **Conclusion**

Patient safety and positive outcomes are a top priority for nurses working in acute healthcare settings. Part of these goals include having adequate nurse to patient ratios to provide the highest level of care for every patient seen. Literature on enforcement of governmentally regulated nurse to patient ratios presents the issue in historical context is an important component of nurse to patient ratios because it explores the concept of the greying of America which assists in the influx of patients in acute care settings that nurses need to give care to. Additionally, researchers studying nurse to patient ratios find that patient health outcomes are also major components in the argument for stricter nurse to patient ratios because it outlines the important role that positive patient outcomes plays in the healthcare system as a whole. Nurses agree that patient safety and quality of care are instrumental components when discussing governmentally enforced nurse to patient ratios because safety is top priority in healthcare. Less patients for each nurse would mean better care and therefore less risk to each patient.

Social policy regarding nurse to patient ratios is vital for acute healthcare systems. Without laws, bills, or written policy patient care standards are not guaranteed to be met all of the time and in every setting. Nurses should have a specified number of patients per shift so that they can provide more intimate patient centered care for all patients being treated. Afterall, “Nurses are educators, so let us [them] work to educate those who cannot experience what we [they] do” (Weaver, 2016, p.8). Nurses are on the front lines providing care and their voices should be heard when discussing policy changes that affect them and their patients. Healthcare is

a universal need because everyone has experienced the healthcare system in some way. Some people have been in an acute facility or even had loved ones in either short term or long-term care facilities. We would all want the intimate, patient centered care that more regulated nurse to patient ratios can provide.

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