MYTHS, IMPLICIT BIAS AND PAIN MEDICATION DISPARITIES IN EMERGENCY DEPARTMENT SETTINGS: A SYSTEMATIC REVIEW OF THE LITERATURE

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ABSTRACT

A disparity in healthcare is any preventable difference that impacts a patient's health outcomes. Disparities arise from health inequities which false beliefs, lack of education, and implicit bias can impact. *Implicit bias* is defined as holding attitudes toward others or associating certain stereotypes with groups of people without our conscious knowledge. Marginalized communities across the United States face a myriad of health inequities due to implicit biases of healthcare providers; one example being pain medication administration rate among patients of color. The registered nurse is vital in protecting patients of color from health disparities perpetuated by the hands of our profession.

The CINAHL database was used to conduct a systematic review of the literature to identify reasons that pain medication disparities might occur in Emergency Department settings. It was also utilized to identify evidence-based practices that could be implemented to decrease incidents of implicit bias in the healthcare system. Significant themes are a) Myth perpetuation regarding race and pain, b) Implicit biases of healthcare providers impact pain medication administration rates for patients of color, and c) Educational and nursing leadership-driven protocols regarding implicit biases. The nursing community is in a pivotal position to help mitigate the risk of poor health outcomes associated with pain medication disparities due to healthcare provider-held implicit biases. Nursing educators and hospital leadership must create an environment that recognizes the culture of implicit biases and supports the necessary work to mitigate the negative impact on patient outcomes. Additionally, introducing a comprehensive

nursing education curriculum focused on delivering equitable care while promoting a culture of change would allow future nurses to help break down barriers that impede upon patient care.

Key Words:

[Pain management, Health Disparities, Implicit Bias, Health Inequity, Emergency Department]

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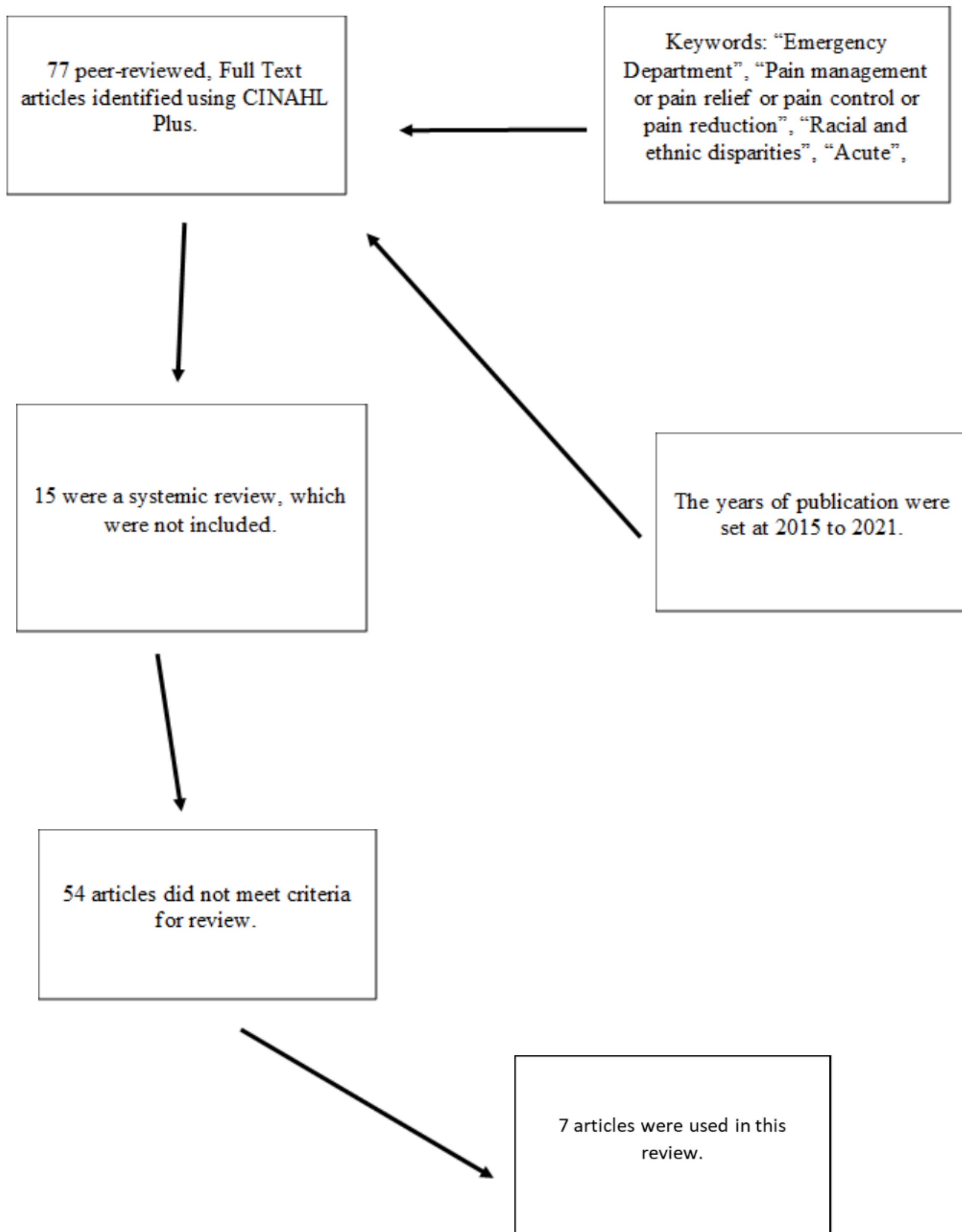

Introduction

The first place that many patients encounter when entering the hospital is the Emergency Department. In the Emergency Department (ED), the patients will be triaged and further evaluated by nurses, nursing assistants, doctors, respiratory therapists, phlebotomists and many others in order to determine the cause of a patient's ailment . Gathering subjective and objective data from the patient during the initial admission in the ED is vital to achieving positive patient outcomes. Pain is considered one of the most vital subjective data points that a nurse or doctor could collect from a patient, as it could give them insight into the patients' overall condition and health. Although healthcare providers provide care that can save lives, the unconscious biases, also known as implicit biases, of the very same healthcare providers can contribute to negative patient outcomes just the same.

Implicit bias and its effect on pain medication administration rates is an entirely preventable phenomenon and is extremely prevalent among non-Hispanic African American patients in Emergency Department settings across the U.S. A study conducted by Dr. Steffie Woolhandler and associates in 1985 analyzed the preventable deaths of non-Hispanic patients of color in emergency health services and compared them with the preventable deaths of non-Hispanic Caucasian patients in emergency health services in Alameda County, California. Their team found that non-Hispanic patients of color whose deaths from manageable conditions that were classified as 'preventable' had a rate of death 77 % higher than their Caucasian counterparts. This research team further concluded that inequalities in health services, such as pain management, played a role in

reinforcing disparities for patients of color that led to their preventable deaths, a trend that has steadily been rising. Implicit biases held by healthcare providers regarding pain medication administration can be directly linked with decreased quality of life, increased length of hospital stays and increased mortality rates (Aronowitz, 2019).

It is essential that nurses and medical providers reflect on their own biases, dispel myths in the medical community and reform the educational curriculum in order to minimize the psychological and physical harm done to patients of color. Addressing this disparity of pain medication administration can lead to vastly improved patient outcomes for patients of color and allow for institutional and widespread change within the healthcare system. Nurses can apply and implement evidence-based practices into the daily care of patients receiving pain medication and ongoing assessment periods which can increase the quality of life for patients of color and decrease the potential risk for negative patient outcomes which can have fatal consequences.

Background

One-third of Americans presently live with chronic pain, one of the foremost reasons people pursue medical care in the United States. Further, 1 in 10 adults seeks emergency treatment for injury-related pain in EDs yearly, indicating a demand for suitable medical pain management for an extensive portion of the population (Aronowitz, 2019).

Nonetheless, in the present state of the US healthcare system, substantial pain-related disparities exist and function as barriers related to access for non-Hispanic African American patients.

Numerous studies over the previous decades have documented that African American patients are less likely than Caucasian patients to receive any pain medication for differing painful ailments, even when noting comparable or higher levels of pain (Aronowitz, 2019). The disparities impacting patients of color originate from distinctive racial, colonial, and governmental histories that have persisted in impacting racial disparities in the healthcare system today; the war on drugs is one of note. Not only are patients of color not receiving sufficient pain medication management, but providers' assumptions that African American patients are at an inflated risk of substance abuse has also led to the augmented enactment of urine drug testing, limited early refills, and various other risk reduction strategies. This is a reality for patients of color, despite substance abuse rates being analogous to rates of Caucasian patients. African American patients are also more likely to be referred to addiction specialists rather than pain specialists when likened to Caucasian patients (Aronowitz, 2019).

Furthermore, non-Hispanic African American patients also undergo longer wait times and lower rates of admission to hospital settings in comparison to Caucasian patients in the Emergency Department (Phan, 2021). These various disparities in pain management disadvantage patients of color by assembling significant barriers to quality care. With this understanding, addressing provider-held implicit biases and misinformation concerning race and its relationship with pain can be enforced to provide optimal support geared toward the pain management needs of patients of color.

Nursing staff, medical personnel, and nursing leadership require standardized training on how implicit bias and myths influence quality of care and patient outcomes for patients of color. Without founded training, nursing staff cannot satisfactorily care for

patients of color and help address their pain. Nurses can usher in change and are in standing to support patients of color in breaking down deterrents to access. Additionally, subpar education and on-the-job training for new grad nurses on supplying equitable care for patients of color make it challenging to deliver the best care possible. Due to the marked influence of nursing over patient-centered care, proper training founded on evidence-based practices concerning diminishing the influence implicit bias has on patient care should be designated to enhance overall patient care and lower mortality rates for patients of color (Stamps, 2021).

Methods

A systematic review of the literature was accomplished to specify what role and to what capacity the implicit bias of healthcare providers played in pain medication disparities for non-Hispanic African American patients in Emergency Department settings. The research articles used were disseminated between 2015 and 2021 to pinpoint the most notable and current findings to support the thesis topic. Additionally, criteria were set for the articles, such as the following: they had to be full in-text articles and peer-reviewed. These criteria were imposed to ensure the validity and factuality of the conclusions of the articles. CINAHL Plus was employed to search for full in-text articles. A Boolean search was also utilized to execute a search using the subsequent terms: “Emergency Department,” “Pain management,” “pain relief,” “pain control,” “pain reduction,” “Racial disparities,” “Ethnic disparities,” “Implicit Bias,” “Nursing,” and “Acute.”

Refer to Figure 1.

Results

Seven studies were employed and fulfilled the criteria of determining an association between healthcare provider-held implicit biases and poor pain medication management for patients of color. Within these seven articles, three major themes were founded: a) Myth perpetuation regarding race and pain in hospital and educational settings, b) Implicit biases of healthcare providers impact pain medication administration rates for patients of color, and c) Educational and nursing leadership-driven protocols regarding implicit biases.

Myth Perception Regarding Race and Pain in Hospital and Educational Settings

Researchers have discovered that long-standing misconceptions regarding the relationship between pain, race, and socioeconomic standing influence how healthcare providers oversee pain in patients of color. Across ten experiments, the association between implicit biases of providers and pre-held assumptions of pain sensitivity was assessed and then applied to scenarios with patients of the following backgrounds: lower and higher socioeconomic standing, Caucasian versus African American patients, and women versus men. Persistent among most of the studies was that providers believed patients of color from lower-socioeconomic standings felt less pain than higher socioeconomic standing non-Hispanic Caucasian patients (Summers, 2021). As a result, the providers felt these patients needed less pain medication than their Caucasian peers. Providers also presumed that being from a lower socioeconomic standing meant having a more challenging life, thus these patients would feel less pain (Summers, 2021). Providers' misconceptions regarding race, pain and socioeconomic standing have been

revealed to impact the pain medication management patients, specifically patients of color, receive. The research noted that education could actually disrupt the perpetuation of these beliefs in the healthcare community, which could reduce barriers to access for patients of color in lower-socioeconomic standings (Summers, 2021).

Researchers have also found that long-standing misconceptions concerning the relationship between race, substance abuse rates, myths about skin thickness, and the gender of providers influence how healthcare providers manage pain in patients of color. Providers are more likely to deem non-Hispanic African American patients at risk for substance abuse than non-Hispanic Caucasian patients. This is evidenced by higher rates of implementation of risk reduction methods despite having comparable usage rates likened to non-Hispanic Caucasian patients (Aronowitz, 2019). It was shown that in that instance, there were no lower rates of overall pain medication administration from providers. Nonetheless, more barriers that extend the process of procuring medications and make it more challenging to acquire the medications required were initiated by providers for patients of color (Aronowitz, 2019)

Furthermore, providers who thought that patients of color have ‘thicker’ skin compared to non-Hispanic Caucasian patients; and thus feel less pain; prescribed fewer opioids for said patients of color (Aronowitz, 2019). Researchers found that nurses and nursing students with similar beliefs ranked the pain that a patient of color might feel after a specific injury lower than that of a non-Hispanic Caucasian patient from an identical injury (Aronowitz, 2019). If patients of color are thought to feel less pain than non-Hispanic Caucasian patients, they may be prescribed less pain medication for their pain.

The gender of providers also influences the relationship between pain medication administration and patients' race. Researchers uncovered that female providers were more likely to administer non-opioid pain treatments to non-Hispanic African American patients than non-Hispanic Caucasian patients (Aronowitz, 2019). A simulation study was performed with a control and intervention group of nurses to explore the pain medication rates for virtual patients; the pool included non-Hispanic African American and non-Hispanic Caucasian patients. The nurses in the control group displayed racial bias, being more likely to order non-Hispanic Caucasian patients pain medication than those of color. However, the intervention group nurses did not display the same racial treatment bias, presumably due to educational measures given as the intervention to this group of nurses and not for the control group (Aronowitz, 2019). A shared thread among these research articles is the positive impact that comprehensive education regarding patient pain can have on enhancing patient outcomes for patients of color. It has been shown that increased awareness and education of one's implicit biases can significantly improve pain management for patients of color.

Implicit Biases of Healthcare Providers Impact on Pain Medication Administration Rates for Patients of Color

Researchers have discovered that providers' implicit biases influence the rate and grade of pain medication management for patients of color. One study looked at self-reported pain intensity levels (PI), heart rates (HR), respiration rates (RR), and nurse-provided emergency severity index scores (ESI) across a total of 359,642 ED visits. 61% of the patients were non-Hispanic Caucasian, 28% were non-Hispanic African American,

and the remainder were regarded as "other." It was determined that Non-Hispanic Caucasian patients received higher ESI scores and higher priority despite conveying lower pain intensity scores than non-Hispanic African American patients (Vigil, 2016).

Further, non-Hispanic Caucasian patients with lower and even increased heart rates received higher ESI scores than non-Hispanic African American patients. It was also reported that ESI scores and priority scores greatly influenced the prioritization of patients, despite both being highly conditional upon the nurse's speculation and perception of the patient's pain and not on what the patient was relaying (Vigil, 2016). Due to this, non-Hispanic Caucasian patients received more urgent treatment than non-Hispanic African American patients, even when the non-Hispanic Caucasian patients noted much lower pain levels. Nurses furthermore employed vital signs as an "indicator" of pain more so in non-Hispanic African American patients than in non-Hispanic Caucasian patients, despite vital signs not consistently being a dependable indicator of pain (Vigil, 2016). A patient's ethnicity and its relationship with nursing-provided ESI scores demonstrated that when there is more clinical obscurity, a patient's race/ethnicity does get integrated into ESI triaging scores by nurses, even unconsciously. The ethnic disparities in ESI scoring could lead to inflated complications for patients of color and the sowing of mistrust among patients of color and providers as a result (Vigil, 2016).

Researchers have additionally found that providers' implicit biases impact the rate and quality of pain medication administration for patients of color, even in specific acute illnesses such as kidney stones and abdominal pain. One study examined 266,210 ED visits for kidney stones to see to what degree implicit biases of providers and patients' ethnicities influenced pain medication administration rates for patients of color. The

population break comprised 84% non-Hispanic Caucasian patients, 6% non-Hispanic African American patients, and 10% patients belonging to other ethnicities. It was determined that non-Hispanic Caucasian patients were 30% more likely than non-Hispanic African American patients to be in the top 75th percentile for morphine dosages (Berger, 2021).

Also, 41.21% of non-Hispanic Caucasian patients were given opioids and ketorolac, compared to only 33.72% of non-Hispanic African American patients. Non-Hispanic African American patients were furthermore most likely out of all ethnic groups to receive neither opioids nor ketorolac, coming in at 18.03%, compared to non-Hispanic Caucasian patients with 16.22% (Berger, 2021). It can be specified that disparities in health care have a lasting effect on the quality of care that patients of color receive. This is particularly true concerning triaging and pain management in an Emergency Department setting. Unrecognized provider ethnic bias contributes to the observed difference between pain medication administration for non-Hispanic Caucasian and non-Hispanic African American patients (Berger, 2021).

Another study amassed data between 2006 and 2010, documenting 6,710 Emergency Department visits for adults with acute abdominal pain. The data was taken from over 350 EDs across the United States. The study represented 25,535,431 weighted visits from 4,722 Emergency Departments nationwide over the same period. Based on the data, it was extrapolated that Non-Hispanic African American patients, on average, had a 22-30% lower risk-adjusted odds of receiving analgesics and 17-30% lower risk-adjusted odds of receiving narcotic analgesics despite noting moderate to severe pain (Shah, 2015). In comparison, 56.8% of non-Hispanic Caucasian patients received pain

analgesics, compared to non-Hispanic African American patients coming in at only 50.9%. Likewise, non-Hispanic African American patients were subjected to more prolonged ED wait times and lower inpatient admission rates (Shah, 2015). The examination of the data substantiated the presence of ethnic disparities regarding pain management in Emergency Departments on a national scale. The study further inferred that less acutely sick non-Hispanic Caucasian patients received higher urgency scores than sicker non-Hispanic African American patients, indicating the presence of disparities in health care delivery (Shah, 2015).

Educational and Nursing Leadership-Driven Change Regarding Implicit Biases

Nursing leadership can use various strategies to mitigate the impact of implicit bias by recognizing its harm on patient care, utilizing the nursing code of ethics, and identifying the triggers of implicit bias in day-to-day nursing practice. The article illustrates a call to action for nursing leadership to commit to handling implicit bias as the consequence of it can have devastating and, at times, fatal implications for patients of color. Implicit bias can unconsciously affect the way that data about a patient is processed, which can, in turn, lead to unintentional discrepancies in care (Stamps, 2021). Fifty-two studies and 27 articles were employed to analyze how implicit bias affects patient outcomes for patients of color. Thirty-five articles, or 83%, exhibited extensive evidence that implicit bias played a role in the decisions regarding patient care made by healthcare professionals such as nurses (Stamps, 2021). Implicit bias can also function as a hindrance to achieving diversity in academic nursing settings. Nurse leaders must welcome diversity to help facilitate and improve student learning to help foster equitable

care for patients of color (Stamps, 2021). Introducing comprehensive academic and institutional programs that cover the entire spectrum of harmful types of implicit bias and the importance of diversity can help boost awareness of incidents of implicit bias in hospital settings and decrease the adverse outcomes that impact patients of color. Deborah Stamps, a nursing educator and diversity officer developed seven courses, one on diversity and inclusion in the nursing discipline and another on how leadership and unconscious bias can affect patient care outcomes. The program entitled "Better Together" utilizes real challenges and scenarios that patients of color have faced in order to prompt group discussion and problem-solving among nurses, nursing students, and other nurse leaders to enforce and implement change (Stamps, 2021). Stamps also designed the Accelerated Nurse Leadership cohort program for new-grad nurses. This program uses topics on diversity, implicit bias, and equity and interweaves them into capstone projects, precepting assignments, and classroom sessions to ensure the adequate competencies of new grad nurses (Stamps, 2021). Overall, the institution of such education and leadership programs for nurses across the spectrum can be imperative to improving patient care outcomes for patients of color in the current state of the United States healthcare system, where explicit and implicit bias persists to this day.

Discussion

The literature shows that implicit bias of healthcare professionals is dangerous to the comprehensive well-being of patients of color and that academic resources and protocols are critical to reducing the incidents of bias, adverse health outcomes, and mortality rates for patients of color. The undertaking of guidelines and scholastic resources concerning how to fight implicit bias from a nursing perspective ought to

increase to thwart any harm to patients of color, not just confined to patients in Emergency Department settings. Prudent regard must be taken when triaging and treating patients of color for the pain to diminish the physical and psychological harms shown to co-exist when a provider's implicit biases play a part in the care a patient receives. There must be sufficient interdisciplinary communication between nurses, nursing leadership, and other healthcare leaders regarding recognizing implicit bias and its role in patient care outcomes and devising and executing nursing procedures that shield patients from harm—and introducing thorough nursing education on how to deliver equitable care to all patients, regardless of skin color. This will enable prospective nurses to be sufficiently qualified to deliver patient-centered and impartial healthcare to patients, leading to more promising patient outcomes and reduced mortality rates for patients of color across the spectrum.

As a result of implicit biases varying from nurse to nurse, it is paramount to the health of our patients that nurses and other healthcare providers are supplied with a standardized approach to identifying and dealing with the unconscious biases that providers may hold. The enactment of said standardized approach could include the commission of simulated experiences for nurses and healthcare providers yearly that address pain management scenarios, the implementation of culturally competent principles of nursing care in hospital settings, and potential screening tools for healthcare providers to take that screen for implicit biases. The foremost goal is to save patients' lives, reduce the physical and psychological turmoil they face in our healthcare system's current phase, and help sufficiently treat their pain. We must shed light on this intricate

matter to produce long-lasting change, as it is not a victimless crisis that can devastate patients.

Limitations

Despite the above research articles' importance, there are still constraints or limitations that ought to be addressed. For instance, this is a multifaceted concern. Some of the research employed simulated experiences, which offer altered and potentially restricted insight into how race may play into provider and patient-related exchanges concerning pain medication administration. Another limitation of the research is that they are mainly founded in Emergency Department settings which may have influenced the findings due to the limited setting and access to pertinent patient information. If other settings and correlational research had been used, there might have been additional outcomes and determinations. The third limitation is that solely full-text, peer-reviewed articles were utilized, and conceivably additional articles could have been incorporated into this literature review.

Conclusions

The pain of patients of color in Emergency Department settings is often not sufficiently managed due to the implicit biases held by healthcare professionals who care for these patients. Nevertheless, it is up to the nurses and other healthcare professionals to ease the impact implicit biases of providers’ have on pain management interventions for patients of color and reduce the subsequent harm done. Not only would dispelling the myths that contribute to these implicit biases help fix this problem but further educating healthcare providers on their biases could boost positive patient outcomes and lower

mortality rates. Nursing leadership, hospitals, and nursing schools need to deliver standardized policies on pain management interventions, implicit bias, and equitable nursing care to further support patients from arrival to the ED all the way to discharge. The nursing community must take pressing action to sow effective and long-lasting change that will enable patients to overcome access barriers such as this. Hereafter, with the enactment of nursing policies that protect patients of color from implicit bias incidents and improve patient outcomes, nursing leadership will be able to sufficiently address the discrepancies regarding pain management care for patients of color in the United States so that every patient is in good hands when seeking care.

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