

# Preparation and Support of Health-System Pharmacy Departments for Nursing Workforce Disruption During Emergency Services

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## Abstract:

Nursing workforce disruptions during emergencies pose significant challenges to the continuity of patient care, especially in critical healthcare settings such as emergency departments and intensive care units. These disruptions, which can be caused by a range of factors, including pandemics, natural disasters, or workforce shortages, not only strain nursing staff but also impact the pharmacy department's ability to provide timely medication and support. This paper explores the role of health-system pharmacy departments in preparing for and supporting nursing workforce disruptions during emergency services. It identifies the support mechanisms necessary for pharmacy departments to maintain operations and ensure patient safety when nursing staff is unavailable or overwhelmed. The paper also highlights the importance of interdepartmental collaboration and communication, as well as the need for comprehensive preparation strategies including cross-training, staffing plans, and mental health support. The findings suggest that a proactive approach to workforce disruptions, with an emphasis on pharmacy-nursing coordination, is essential for sustaining quality patient care in times of crisis.

**Keywords:** Nursing Workforce Disruption, Health-System Pharmacy, Emergency Services, Interdepartmental Collaboration, Pharmacy Support, Staffing Plans, Cross-Training, Mental Health Support, Crisis Management, Patient Care Continuity.

## 1. Introduction

A nursing workforce shortage may severely interrupt any emergency department or critical care unit sooner than we think. How does this affect nurses, patients, and other health services? Nursing workforce disruption should also concern health system pharmacy departments and directors. The financial analysis of what it will take to recruit extra staff or supply temporary incentive pay to mobilize necessary credentials is just on the horizon. Departments of nursing will invariably look to decentralized pharmacy departments to help fill in at staff so that the nursing operation and continuity of care are not disturbed. For a pharmacy director to prepare for emergencies with everything in mind except pharmacy staffing is to prepare for failure. Utilizing resources with a pharmacy practice focus, the primary objective of this essay is twofold:

to identify a support mechanism that pharmacy departments, as a part of auxiliary services in health care, may need to perform when a workforce disruption necessitates pushing pharmacy generalist staff into a salaried pharmacist staffing role in emergency services sectors of health care units, the nursing practice bedside roles; and to identify types of support that any health care entity should perform for the professionally licensed staff who may staff areas where staff ratios have been relaxed in order to continue to protect patient and corporate rights. Staff who, because of illness or personal reasons, require a relaxed nurse and patient staff ratio, also must be protected.

The strategic planning that went into developing a strategy that would allow our hospital to continue practice despite critically restricted budgets, severe leadership turnover, and operations during a time of potential nursing workforce disruption eventually led back to the pharmacy department. Task force investigations in our integrated healthcare system looked at the combined responsibilities of hospital pharmacy services, emergency preparedness, and infection control for nursing home and residential care pharmacy staff, physical therapy and occupational therapy staff, respiratory care staff, radiology staff, and others. The lowest denominator among these groups is that they provide auxiliary or unscheduled patient care and services at the patient bedside. In this essay, rather than nursing profession staffing hours, unlicensed assistance personnel staffing levels, the ability to initiate just-in-time education of traditionally unsalaried college students, or corporate utilization of private or federal personnel ratios, we focus on the needs of pharmacy and ancillary or auxiliary services in the continuum of care. More generic temporary flexibility, enacted during mass casualty situations or pandemic declarations, should be anticipated and be in compliance with the legal protections for staff endorsed by various nursing groups.

### **1.1. Background and Rationale**

Workforce disruptions happen every day in healthcare. Often these are relatively small in scale, well delineated in time and extent, and easy to predict. Every so often, however, a significant workforce disruption will occur. These could be a planned incident such as a labor strike, or they could be unplanned public incidents that disrupt healthcare such as natural disasters, transportation or industrial accidents, political unplanned border crossings, or an epidemic or pandemic. Health systems have seen workers call out or not come in to work because of community-level disruptions such as snowstorms, ice storms, floods, and power outages causing all health organizations to struggle to meet increased patient demand on what is often a smaller than usual workforce and worsened by less accessible timely healthcare in the community. Many countries have seen shortages of nursing staff, in particular. In many of these situations, pharmacy remains fully staffed and with increasing demands due to disrupted usual processes pharmacy staff must answer more phone calls, support other clinical and environmental rapid changes, and generate more medications for delivery. (Tamata & Mohammadnezhad, 2023)(Winter et al., 2020)(Sen-Crowe et al.2021)(Buchan et al., 2022)(Al Thobaity & Alshammari, 2020)(Abbasi, 2020)(Tolksdorf et al., 2022)

Disruptions in the nursing workforce in a health system will have a significant impact on the ability for all services to be delivered as they are normally expected to be delivered. For pharmacy departments, the changes in the relationship are influenced directly in interactions with and support of nurses and nursing units, medical residents, nurse practitioners and physician assistants, attending physicians, and most importantly patients and their family members. The disruption in the ability to see and touch patients will also affect the pharmacists and, in many practice environments, expand the pharmacist's ability to see and support patients being cared for in other environments of care. The dispensing of and the access to medications are essential to patient safety

and quality of care, including patient outcomes. Whether nursing and pharmacy personnel are in the same healthcare service organization or working in completely different organizations, understanding the importance of helping and serving the patient is the ultimate desired outcome and providing that care remains necessary. Offering assistance to support care allows other healthcare colleagues to support teamwork and can also allow the healthcare organization to provide accurate and appropriate follow-up care after the emergency. Offer the dispensing of prescription medications and drugs as part of follow-up care as you are able. Learn and document who you are helping. Providing this care and in-kind care will not increase your risk, nor interfere with the delivery of clinical healthcare services or prescription medication refills by the organization providing disaster relief. It will support all caregivers who are struggling to provide patient care during a disaster or public health emergency.

## **2. Understanding Nursing Workforce Disruption in Emergencies**

Nursing workforce disruption can occur during emergency healthcare scenarios for a variety of reasons. Understanding how and why such changes manifest can assist in the creation of health system continuity of practice responses. The nursing workforce is regularly disrupted during acute healthcare situations. Some workforce disruptions are temporary, while others are more permanent changes in position or status. Disruptions to the nursing workforce may include an escalation in illness resulting in an increased use of sick time by healthcare providers. Health practitioners may call in sick due to concerns that exposure will extend into the home or due to insufficiently communicated experiences of immunization. Other sites may experience absences due to the reluctance of healthcare providers to come to work or a shortage of voluntary employees as the infrastructure to work is compromised.

Strategies to mitigate these workforce disruptions are predominantly explored in the literature as a verb-negative. In this, the research examines how to get healthcare providers to come to work when there is a reluctance to do so, when healthcare providers call in sick for non-health reasons, and how to make healthcare providers happier. In the exceptions when positivity is examined, the work is often focused on patient outcomes rather than the impact on the healthcare team, such as a nursing work environment scale. A literature search strategy was presented using a combination of controlled vocabularies and free-text searching in three electronic databases. No date range was applied. To be eligible for inclusion, studies had to consider nursing workforce disruption in an emergency healthcare context. This involved nursing workforce disruption in an acute healthcare setting, real or simulated, or in a natural disaster, pandemic, or disease outbreak. In addition, the reasons for nursing workforce disruption within this context had to be explored.

### **2.1. Causes and Impact**

There can be multiple causes of workforce nursing disruption during emergency department patient services, and the impact can be significant. Predictable causes include staffing shortages during evenings, nights, and weekends, and sudden increased immediate needs resulting from events. Although these are predictable, knowing when these staffing shortages will occur up to a year in advance or on varying dates in the spring can be challenging and requires preparation to plan for the supplies. Less predictable events include unexpected increases in patient volume, often during times of crisis in other areas. These events increase stress and time pressures exponentially as these patient surge events add to the workload associated with the pre-scheduled events. While physicians have been known to extend this stress level in nursing, the majority of physicians only engage in stressful situations. In contrast, when the nursing disaster alert is engaged, every available nurse provides staff nursing services. (Maddineshat et

al.2021)(Weigl et al., 2020)(Caulfield et al.2023)(Pourmand et al.2023)(Kwon et al., 2021)(Timmins & Timmins, 2021)(Wang et al.2021)

The state of the literature surrounding the various types of nursing workforce disruption makes clear that nurses are identified as critical team members with unique knowledge in emergency patient services. Only a small number of identified articles were empirical evidence of the impact of not having nursing employees at the bedside. These included the primary impacts of patient adverse outcomes, such as pain worsening, more patients leaving without being seen, fewer rounds being reported, and lower compliance with sepsis bundles. The impact of interfacing between nurses and physicians in these articles showed that the physicians recognize the increasing challenge of working in emergency care in an era of nursing technician shortages. Post hoc calculations correlated the loss of the nurse cart technician with a significant increase in rolling rate and an increase in patient care. A telehealth unit requiring follow-up on its patients showed no significant increase in adverse patient outcomes while following up on the patient board directly. Four of the articles were based on descriptions of why nurses do not report for work; these themes included child-rearing emergencies, lack of monetary penalties, and life emergencies. Recent qualitative study research showed how the triaged and used her own version of distance capture to work technology. Building a scheme of available hospitals and email distribution to patients to see a better approach to the lobby is a non-critical aspect of the many. Instead, the detector, house forwarding, and the monitor missing patient ER main. This study showed how a location aspect to how the management of ED stress has the potential to focus on ED and internal collaboration in the ED. (Holmberg et al.2020)(Anton et al.2021)(Vázquez-Calatayud..., 2022)(Martland et al., 2020)(Beckett et al.2021)(Khanlou et al.2022)(McNett et al.2021)

In sum, a workforce disruption can occur at various points along the personnel attrition continuum. The causes can be varied and often complex, requiring system-wide solutions. The impact of a workforce disruption can further compromise care, even among the best prepared staff. We need system-wide research and innovative solutions, including processes for regular updates on influencing factors.

### **3. Role of Health-System Pharmacy Departments in Supporting Nursing Workforce**

**Abstract:** Disruptions in the nursing workforce have the potential to impact patient care and require a strategic response by health system pharmacy departments. Nurses' primary concern is patient care in the moment. This competition for activities may limit the attention of nurses to their own needs. Hence, establishing support structures is critical to ensuring the continuity of care during and after disruptions. The pharmacy and nursing departments each perform interdependent functions that render the combined output greater than the sum of each functioning independently during a disruption. Therefore, connections between departments are key as the disruption affects nurse function, with a significant portion of daily operation related to medications. These interconnections increase the risk to patients if not addressed.

Planning is key to the successful response required during a nurse disruption, and it is essential that collaboration and communication are in place pre-disaster. Strategies for addressing the nursing workforce and communication between departments are embedded in disaster preparedness. In the case of preparing for a nursing workforce disruption, the key is maintaining both the ability of the nursing workforce to ultimately support patient care as well as engaging the recruitment and placement of additional workforce, nursing and others. Here, too, collaboration and communication are key to the successful sustained practice of the nursing workforce. Nursing's placement and HR

training are important, but the pharmacist's role is to address the managerial and policy-setting preconditions that may act during a disaster to weaken the nursing workforce by substantive or symbolic sidelining of basic nursing functions in the name of optimizing medication therapy. (Ion et al.2021)(Obeagu et al.2023)(Hofmeyer & Taylor, 2021)(Gaffney et al., 2021)(Leaver et al., 2022)(Kavanagh, 2021)(Kumar & Sharma, 2021)

### **3.1. Collaboration and Communication Strategies**

Recent literature reviews emphasize the necessity of internal or interdisciplinary partnerships and the crucial role of regular meetings and communication between these partners in adapting to or effectively managing a large-scale crisis. Prioritize the establishment of good lines of communication before an event in order to have some existing relationships and communication methodologies already in use when a disaster occurs. One major highlight from our literature search is the necessity of recognition and trust building between nurse and pharmacy departments in order to stage an effective interdisciplinary team. (Dilles et al.2021)(Gregory and Austin2021)(Forsyth et al.2023)(Rodrigues, 2021)(De et al.2021)

It is important to be active in regular meetings, skill training, and debriefing sessions to build open communication and solve problems. The importance of having universal training programs that nurse and pharmacy staff can attend together, as well as simulation training that both groups complete in concert, cannot be overstated. The utilization of protective gear and personal protective equipment by staff from both groups should be taught and practiced in these sessions. Group-wide training and a familiarity with patient pathways, as well as the unique roles and responsibilities of staff from both groups, enhance successful response efforts. We must consider how to enhance these relationships with electronic means of communication. (Al-Haqan et al.2021)(Bates et al.2023)(Mohiuddin, 2020)(Tran et al.2021)(Health Organization, 2024)(Health Organization, 2022)(Nikiforow et al.2023)

Many potential barriers for interdisciplinary communication can be overcome by enhancing the personal acquaintance of the staff involved in an outside-of-work context. Activities such as graduation celebrations, off-site holiday parties, and similar events that encourage staff members from both professions to build relationships outside the work environment have potential for this outcome. Development of an "Events Team" or special group that oversees these activities can be an excellent way to foster collaboration. As a collaboration and communication strategy, when something is going on, a scaffolded workload release can help facilitate the utilization of employees from one group to help support the other department. By releasing pharmacy staff from routine, normal workload tasks, it provides opportunities for them to learn more about what nursing does "on the job" in order to facilitate interdepartmental cooperation at a time of crisis. The main goal is establishing a commitment to team building and collaboration through assigned orientation and training. Learning together about "the other" will also allow each group to develop managerial and operational strategies for better success in an actual event. Voluntary, advanced learning can be fun and promotes teamwork when it transfers to day-to-day operations. Build openness in your collaborative relationships. Nursing and pharmacy staff must be able to assist in stressful times and to understand who they can rely on from the other group. Increased familiarity with the opposite group's responsibilities and procedures can be invaluable. Needs and availability can be better communicated and managed in a trauma situation. In this way, a common patient advocacy and actual conditions are promoted.

#### **4. Preparation Strategies for Pharmacy Departments**

The preparation process provides assurance that appropriate strategies are in place before a disaster to anticipate a response process. As related to disaster response within a healthcare setting, the lack of comprehensive preparation can lead to overwhelming scenarios. To maintain the integrity of care during a nursing workforce disruption, or during a significant surge in disaster-related need, a healthcare facility should develop and implement preplans to compensate for the absence of nursing resources and to direct the expertise and skill set of registered nurses into patient care roles. Similarly, pharmacy departments should prepare to withstand or continue operations during a potential nursing workforce disruption. This identifies strategies within the pharmacy department or hospital that can provide a comprehensive and organized response to nursing workforce disruptions. (Martini et al.2024)(Craswell et al.2021)(DiPiro et al.2021)(DiPiro et al.2023)(Cassidy and Shabsigh2022)(Schommer et al.2022)(Watson, 2022)

Ultimately, the staffing plan provides a staffing adjustment system to respond to the anticipated staffing shortfalls based on the phased responses. It also addresses shift management, overtime usage, and consideration of an Event Preparedness Risk and Communications Plan. In addition to staffing, our staffing plan includes information on resource allocation and inventory management to prevent supply insufficiencies for their operation. Collaboration between pharmacy and nursing leadership will help to maintain a sense of unity, build relationships, and ensure the vision and goals of the organization's leadership and management and the various departments are aligned. Both the nursing administration and hospital administration departments are involved in the grant application, as the goals and objectives are to build innovation, consistency, and collaboration between the overall hospital operations and the specified departments. The staff will embrace the processes for seamless management. All of the innovations described will enhance the resilience of the tools and the management and operations of the organizations during disruptions. (Forsyth et al.2023)(Dilles et al.2021)(El-Awaisi et al.2024)(Kristoffersen, 2021)(Christina & Irianto, 2023)(Thrysoee et al.2022)(Masibo et al., 2024)

##### **4.1. Staffing Plans and Cross-Training**

Staffing is an essential, though often overlooked, component of the successful operation of a health system pharmacy department. Staffing plans help distribute workload, maintain regular schedules, and ensure continuity of critical activities during an emergency. As nurse absentee rates grow, it is important to develop plans that can adjust the level of staffing required based on the timing, degree, and duration of the workforce shortage. One mechanism for maintaining flexibility in the staffing plan to deal with ever-changing conditions is regular cross-training of staff. This training ensures the readiness and availability of a workforce with skills that allow them to complete critical departmental operations should staffing needs increase abruptly. Staff cross-training may alleviate the concern of additional workload placed on departments as well as employees. Cross-training is the process of having pharmacy staff learn functions within the department other than their regular assignments. Cross-training may involve a single new skill, a single function, or a set of functions that provide a new job description for the employee. Additionally, cross-training may involve higher-level processes that require staff to put together a set of functions to effect a specific intervention. (Causby et al., 2024)(ŞİMŞEK & ŞİMŞEK, 2022)(Owino, 2023)(Roy, 2021)(Al Harbi et al., 2023)(Basnawi, 2023)(Gupta et al.2023)(Mazumdar & Mazumdar)

Often, departments find it productive to identify several key pieces of information that ensure they can maximize their workforce productivity. First, it is necessary to identify the critical pharmacy functions and/or procedures for basic departmental operations. Second, staff readiness to provide specific services and the competencies of staff members in specific areas of departmental human resources are important. Available competencies or resources are the best that the department can provide to meet service delivery standards, thus fulfilling patient-focused operations, despite the difficulty of a crisis, diminished workforce, or significant overwork. In order to gradually develop a workforce skilled in a variety of areas, the institution and department must systematically identify and address staff readiness to acquire this new knowledge and skills. This capacity to learn, relearn, and adapt, hereafter referred to as the "adaptive capacity," is an important part of a cross-training type strategy. There continue to be discussions within the field of hospital pharmacy about tools and checklists for site-specific pharmacy staff readiness assessment and validation for deployment and service. Staff readiness assessments and needs for practice development are discussed in other contexts, and staff readiness and assessment tools will not be discussed in great detail in this particular publication. There are a number of pandemic-based crisis tools to support health system staffing and workforce assessment planning. For example, a guide provides staff crisis competency assessment tools and a brainstorming list for various support services and possible workforce shortages. In the event of a healthcare emergency, this guide may be of use to hospital pharmacy leadership. It contains an extensive list of will-call staffing resources in clinical, operational, and administrative services. Additionally, the document provides a list of management items a leader should consider when making decisions regarding will-call staffing and the use of unlicensed staff. (Miake-Lye et al.2020)(Sartas et al., 2020)(Hennessy et al.2022)(Ngenzi et al., 2021)(González et al.2023)(Chuang, 2021)(King et al.2021)(Wang et al.2023)

## **5. Support Strategies for Pharmacy Departments**

While it is clear that managers do not manage or control crisis situations or their consequences, tools are available to help management development better support and prepare employees who will be involved in these difficult situations. It is crucial that managers view a supportive organization as one that encourages or provides for the well-being of its employees. This is crucial when developing programs or services for managers that will facilitate a more supportive environment. In a supportive work environment, managers need to better understand the specific events and situations that will unfold in their facilities, as well as the impacts on their employees, including the nursing and pharmacy staff. Each of these scenarios has obvious and important human resources consequences. It is important to make available to healthcare workers who appear in locations impacted by workforce shortages the necessary resources. (Atkin & Brooks, 2021)(Craighead et al., 2020)(Sharifi & Khavarian-Garmsir, 2020)(Pan & Zhang, 2021)(Awada et al.2021)(Pan & Zhang, 2021)

This support can take many forms, and it is important to consider the need for different strategies for discharge diversion and actual expansion of acute care facilities. It seems one likely scenario for pharmacy will be to locate enough new nursing staff and educate and train them quickly. Stress on the staff's part and frustration with new staff compromise patient care and can have direct negative impacts on the work of pharmacy. Managers working to address the issue of increasing workload while the number of staff is decreasing need to be aware of additional stresses on staff. Developing resilience in staff starts with proactive strategies such as communication. Staying in touch with staff is important; while it has the benefit of providing employees with important

information and signals support, it also provides managers with a way of "testing the temperature" of employee morale and determining if an Employee Assistance Program or Critical Incident Stress Debriefing provider is necessary. If a more in-depth response is required, an appropriate professional can assume this role. Staff should also be informed of the mental health resources that are available for them. (Maben et al.2022)(Lundsten et al.2024)(Thompson et al.2024)(Sweeney et al.2022)(Ham et al.2022)(Ralph et al.2022)(Madsen et al.2023)

### **5.1. Mental Health Support for Staff**

During any crisis, such as a workforce disruption, it is important to acknowledge the severe stress that staff, both pharmacy and nursing, will be under and tailor compassion and support for them. For nursing, there are strategies to help staff during a workforce disruption. A lesson learned from previous workforce disruptions is the critical need for mental health checks during a disaster at the worksite. Emergency mental health clinician visits for the staff nurses and pharmacists in the pharmacy department during a workforce disruption are a beneficial way to offer mental health outreach services. Mental health outreach is an opportunity to help staff feel that others value them. (Wong et al.2020)(Richmond et al.2021)(Bell & Wade, 2021)(Branjerdporn et al.2022)(Yong, 2021)(Nguyen et al.2023)

There are many strategies that may benefit the mental health of staff. Creating a culture that supports mental healthcare starts by promoting awareness, which can hopefully destigmatize the issue. This can be accomplished through education, making mental health resources accessible, and making mental healthcare visits a norm by scheduling routine mental health check-ins during high-stress times. Valuing one's mental healthcare needs is an important aspect of mental health because it is an opportunity to say 'thank you.' It is an opportunity to signal to healthcare workers that they are cared about and important, and that taking care of themselves is also important. Employees may not need to see the counselor, social worker, or psychologist; however, being asked to do so once per month may be appreciated and reduce stigma. Staff selected to work in the mental health department offer hope to those who come seeking mental health help. When anyone, including healthcare workers, speaks about their own mental health issues, it is a sign that taking care of oneself is important to everyone, especially healthcare workers. Staff should remind each other of why they work in healthcare. Matters of the mind and spirit need to be cared for and protected. Staff can remind each other of that. A supervisor and director are visible leaders in nurturing a supportive culture of mental health support, which values life, safety, kindness, caring, and compassion. In fact, mental health leaders are critical team leaders during a pandemic, for example. In a supportive culture, working harder to prove oneself will be replaced by the evidence-based results of hard work regarding positive patient outcomes. The mentee is a valued treasure, and the role of a leader in this process is to create a protective factor within the department from burnout, compassion fatigue, and emotional exhaustion. There is a return on investment in supporting mental health services that provide mental health care outreach to the worksite or pharmacy. (Geerts et al.2021)(Greenberg & Tracy, 2020)(Drew & Martin, 2020)(Wardman, 2022)(Giusino et al.2022)(Walton et al.2020)(Guttormson et al.2022)

### **Conclusion:**

Nursing workforce disruptions during emergency situations can significantly impact the quality and continuity of patient care. Pharmacy departments play a crucial role in supporting the nursing workforce and ensuring that critical patient needs are met, especially when nursing staff are unavailable or overwhelmed. This paper has outlined the importance of collaboration between pharmacy and nursing departments, the



necessity of cross-training, and the development of comprehensive staffing plans. In addition, mental health support for healthcare workers during times of crisis is essential to maintain staff well-being and morale. Proactive preparation, including clear communication strategies and flexible staffing mechanisms, is vital for health systems to continue functioning effectively during workforce disruptions. A well-coordinated approach that integrates the strengths of both pharmacy and nursing teams is key to maintaining patient safety and optimal care during emergencies.

#### **Recommendations:**

1. **Enhance Interdepartmental Collaboration:** Foster stronger relationships between pharmacy and nursing departments through regular meetings, joint training sessions, and shared responsibilities to ensure smooth coordination during workforce disruptions.
2. **Develop Cross-Training Programs:** Implement regular cross-training initiatives for pharmacy and nursing staff to ensure all team members are familiar with each other's roles and can step in during emergencies, alleviating pressure on nursing staff.
3. **Establish Comprehensive Staffing Plans:** Develop and maintain flexible staffing plans that address potential shortages and ensure adequate coverage, including overtime management, temporary staff recruitment, and contingency plans for critical roles.
4. **Provide Mental Health Support:** Implement mental health outreach programs for both pharmacy and nursing staff during crises to reduce burnout and emotional strain. Regular check-ins and access to professional mental health services should be prioritized.
5. **Stockpile Essential Medications:** Ensure that the pharmacy department maintains an adequate inventory of essential medications, especially in anticipation of emergencies, to avoid supply shortages that could further strain the nursing workforce.
6. **Leverage Technology and Automation:** Utilize pharmacy automation tools and electronic health records to streamline medication management, reduce workload, and enhance the efficiency of pharmacy operations during crises.
7. **Conduct Regular Disaster Preparedness Drills:** Regular disaster preparedness drills involving both pharmacy and nursing teams can help identify gaps in coordination, improve response times, and ensure readiness for unforeseen events.

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