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CASE AND COMMENTARY: PEER-REVIEWED ARTICLE

How Should Health Care Organizations Protect Personnel in Environmental Services and Related Fields?

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Abstract

This commentary on a case discusses oft-overlooked roles of health care organizations' personnel in environmental services and related fields, such as waste management. Such personnel are not protected in the same ways frontline clinicians are, although their risk of exposure to pathogens in the course of their work can be high. This article describes why such personnel should be included in planning personal protective equipment access and in administrative and engineering operations concerning infectious disease emergence, containment, and management.

Case

Ms A is a hospital administrator at RR Hospital in the United States. RR Hospital is a 150-bed community hospital in an urban environment. Dr V, an infectious disease physician, oversees RR's Department of Hospital Epidemiology and Infection Control, which includes developing infection prevention and control (IPC) protocols and planning for pandemics. A novel strain of influenza that is airborne transmissible has emerged and is beginning to impact the entire United States and RR Hospital.

Effective IPC plans must include hospital personnel in environmental services and related fields ESRF)—who enter, maintain, repair, and clean all areas of the hospital, including patient's rooms—and waste management staff in protocol development, but Dr V realizes the IPC plans were not created in consultation with the waste management firm with which RR Hospital contracts. The contract stipulates that waste management workers will enter hospital rooms and empty biohazardous containers and that RR Hospital must provide gloves. For an airborne transmissible pathogen, however, gloves are insufficient personal protective equipment (PPE); N95 respirators are also needed.

RR Hospital does not have enough N95 respirators for the waste management firm's workers, however, due to national shortages. The waste management firm does not have an N95 supplier, as respirators were previously not needed, and they cannot secure one. Ms A and Dr V are concerned about the safety of waste management workers, who, in addition to not having N95s, have little training in IPC. Ms A has neither extra staff nor available supplies but recognizes the importance of protecting all

workers, especially RR's lowest paid workers from historically marginalized communities. Ms A and Dr V wonder what to do.

Commentary

Health care workers (HCW) are typically familiar with risks of caring for patients with infectious diseases. They also typically benefit from training on how to properly implement evidence-based IPC protocols—especially for emerging infectious diseases—that bolster the safety of HCWs, patients, and communities. Those working to safeguard health have social and institutional obligations to ensure the safety of not just HCWs but of everyone integral to IPC and containment.[1] During the COVID-19 pandemic, IPC guidance tended to emphasize the importance of adequate protections for some frontline workers but often neglected personnel in other key roles.[2,3] Workers in ESRF within hospitals are sometimes relegated to contractor status, which prohibits them from participating fully in an organization's employment benefits (eg, training, insurance, paid time off) and can entail receiving lower pay and not having their health and safety needs prioritized, despite their risk of COVID-19 infection being higher than that of frontline clinicians.[4] In addition to inequitable protection, many of these workers belong to historically disenfranchised groups, whose minoritized status can be compounded by lack of or inadequate insurance, limited paid time off, food insecurity, and housing instability.[5]

The literature addressing protections for workers in ESRF in hospital settings during emerging infectious disease outbreaks is underdeveloped.[6,7] Current scholarship provides a strong rationale for prioritizing HCWs in emerging infectious disease preparedness,[8] but in order for workers in ESRF to be fully protected, the following requirements must be met:

1. Health care organizations must be proactive about emerging infectious disease threats and inclusive about response planning.
2. Health care organizations must treat workers' risk equitably, regardless of their status as frontline clinicians or contractors, even when contractual documents do not consider the changing environmental conditions of infectious disease transmission risk.
3. Infectious disease experts must recognize that workers in ESRF are key stakeholders in planning because they have essential roles in organizational functioning and IPC execution prior to and during infectious disease outbreaks.

This commentary discusses the oft-overlooked role that health facility workers in ESRF can play in IPC planning for an emerging infectious disease and its implications for health justice.

Safety Culture

The US Occupational Safety and Health Administration (OSHA) identifies hospitals as one of the most hazardous places to work,[9] with health care support workers suffering an increasing number of fatal occupational injuries between 2017 and 2020 and nursing aides and workers in ESRF within hospitals suffering a substantial proportion of injuries and illnesses resulting from health care employment.[10,11] Inequity in death and illness among workers is due to interrelated factors (eg, the nature and hazards of jobs performed, baseline health conditions, socioeconomic determinants).[7] The COVID-19 pandemic illuminated these workers' exacerbated vulnerability.[12] For example, frontline workers likely have the highest risk of exposure to SARS-CoV-2, and older workers with

comorbidities and co-exposures are at higher risk of adverse clinical consequences of COVID-19 infection.[7] HCWs knowingly bear increased risk of infection, but, generally, workers in ESRF in hospitals do not explicitly agree to, are not compensated for, and are not trained to protect themselves from increased risk.[13] In the case, Dr V realizes that, in the current IPC protocols, cleaning and waste removal fall to hospital environmental services and waste management staff, although such workers were not invited to participate in planning and were not offered training to ensure their readiness to respond to an emerging infectious disease threat or increased risk of harm.

For a safer environment to be established and maintained, planning must include workers in ESRF within hospitals,[14] especially planning for hospital preparedness, which is central to responding effectively. Despite their key role in ensuring containment, workers in ESRF, such as cleaning staff, are seldom mentioned in the literature on IPC and industrial hygiene guidelines.[15] This neglect and lack of inclusion of ESRF workers in the guidelines results in less effective IPC practices.[15]

As the novel disease is understood to be an airborne threat, Dr V receives notice that the waste management firm employees need PPE and training. Both Dr V and Ms A realize that their policies and protocols did not account for PPE shortages and the uncertainty that accompanies an emergent, highly infectious disease. Dr V must know that, for this specific disease, the waste generated from patients with the novel influenza strain has been categorized by OSHA and RR Hospital's home state as a regulated medical waste, which requires handling according to the OSHA Bloodborne Pathogens Standard[16] but does not require the use of a respirator for the tasks of cleaning or emptying the sharps disposal containers. However, the patient care room environments in which waste is generated are no longer standard, as they now contain an airborne virus that requires the use of a respirator. And as the contract never intended these workers to enter rooms where patients were under airborne isolation protocols, RR Hospital's contract waste management workers did not undergo fit testing for respirators. More generally, such workers are not required to be consulted in the development of an exposure control program.[16] Had workers in ESRF been considered in the development and execution of the IPC protocol, the lack of PPE and fit testing might have been identified earlier—prior to the protocol's implementation when these deficiencies endanger workers and the community.

Ethics, Equity, and Safety

Workers who earn low wages have suffered disproportionately high morbidity and mortality rates during every US influenza pandemic.[4,17,18,19,20] In the first year of the COVID-19 pandemic, structural discrimination created inequities in risk of exposure and health outcomes of workers who earn low wages, such as home health aides.[21] These frontline workers were harmed by the lack of adequate worker protection policies, health care access, and preparedness efforts centered on their roles.[2,10,22,23] As a result, concerns about the health and safety of workers in ESRF were reactive, which had the effect of compounding existing health inequities and leaving many workers without essential protections that all workers who risk their health to do their job deserve. Despite a history of health injustice in previous pandemics and public health emergencies and calls from scholars to attend to health equity in pandemic planning,[18,24] the COVID-19 pandemic mirrored results from previous epidemics and pandemics, as workers in low-wage, frontline occupations suffered disproportionate risk of exposure and poor health outcomes.[21,22]

Health justice has both procedural and distributive implications. Procedural health justice requires transparency and accountability to promote the trust of those burdened with additional risk of exposure during an emerging infectious disease outbreak.[25,26] Distributive health justice necessitates the equitable distribution of resources and burdens informed by the consideration that an emerging infectious disease can disproportionately burden some groups, including workers in ESRF who earn low wages and often belong to historically disenfranchised groups.[5]

Finally, solidarity acknowledges the interdependence of community members in an infectious disease outbreak—a shared vulnerability that should incite a shared commitment to one another.[27] Solidarity also honors the dignity of and respect for community members, regardless of their individual productivity, abilities, or social standing.[28]

In the case of RR Hospital, procedural and distributive health justice would require the institution to ensure equity in the development of IPC policies and in protections for workers' health and would acknowledge that these workers becoming sick might have severe economic consequences for themselves and for the health of communities in which they reside, as these individuals might have fewer resources (eg, paid time off, health care, financial reserves) to address such an illness. The hospital should anticipate risks to the safety of workers in ESRF within hospitals, including contractors, as these risks can be controlled if given sufficient priority.

Organizational Commitment to Safety

Appropriate planning for the hospital should include engaging ESRF stakeholders within the hospital concerning PPE and administrative and engineering controls before an emerging infectious disease threat. Failure to include these workers in IPC planning is indicative of barriers within an institution to safeguarding their health.[15] Health care administrators like Ms A must consider all workers, including contract workers, in their IPC plans for responding to known or suspected highly infectious diseases. Established contracts and protocols often don't consider changing environments and increased risks associated with highly infectious diseases, so it is imperative that, in the face of these new environments, health care administrators reevaluate contracts and protocols that serve to protect both individuals and public health. Protections for these workers are foundational to the health ecosystem—they safeguard the health of patients, health care workers, and communities.

Straightforward, thoughtful solutions do exist. The hospital could both conserve N95s and better safeguard waste management workers' health simply by asking HCWs to pass the waste containers to the waste management workers who are outside the room. However, lack of contractual protections requires institutions to negotiate the structural barriers that impact worker health prior to an infectious disease outbreak.

Conclusion

In the face of an emerging infectious disease threat, IPC planning and response must be anchored in the public health values of health and safety, justice and equity, and interdependence and solidarity. Had workers in ESRF been included in RR hospital's preparedness efforts, the hospital might have had a chance to plan for the challenges of worker protections in advance instead of facing these issues for the first time in the middle of an emergency. Going forward, emergency and pandemic preparedness

planning should consistently integrate HCW and workers in ESRF alike out of an obligation to safeguard the health of all workers and the community.

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Editor's Note

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The author(s) had no conflicts of interest to disclose.

The people and events in this case are fictional. Resemblance to real events or to names of people, living or dead, is entirely coincidental. The viewpoints expressed in this article are those of the author(s) and do not necessarily reflect the views and policies of the AMA.

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