

Commentary

Back to the future: Redefining “universal precautions” to include masking for all patient encounters

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Abstract

Despite recent guidance from the Centers for Disease Control and Prevention (CDC) allowing institutions to relax in-facility masking strategies and due to our evolving understanding of respiratory pathogen transmission during the coronavirus disease 2019 (COVID-19) pandemic, we propose an updated standard for universal precautions in healthcare settings: permanently including universal masking in routine patient-care interactions. Such a practice prioritizes safety for patients, healthcare providers (HCPs), and visitors.

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A famous 19th-century painting by Thomas Eakins, *The Gross Clinic*,¹ depicts a renowned surgeon performing a procedure in a classroom without wearing gloves, gown, or a mask; he is also closely surrounded by observing students similarly clad in street-wear. The image is jarring to viewers today because personal protective equipment (PPE) and aseptic surgical technique are now the standard of care. Historically, major shifts in PPE and infection prevention practices have evolved along with understanding the transmission dynamics of pathogenic organisms and as an outgrowth of efforts to contain emerging pathogens during epidemics and pandemics.

The emergence of AIDS and human immunodeficiency virus (HIV) infection in the early 1980s and the subsequent presence of patients harboring this new disease in hospitals prompted substantial anxiety among healthcare providers (HCPs). The Centers for Disease Control and Prevention (CDC) responded by issuing guidelines² to be followed during direct care of all patients (initially called universal precautions and now known as standard precautions) that were designed to mitigate blood-borne pathogen transmission risk by using appropriate barriers (eg, gloves) to prevent contact with potentially infectious body fluids. Although these precautions initially met with some skepticism and resistance in the healthcare community, they have now been successfully integrated into patient care. In truth, such guidelines likely should have been recommended when the first instances of occupational hepatitis B virus infection were documented in HCPs in the 1940s.³ In this article, we argue that universal masking during patient encounters, instituted during the coronavirus disease 2019 (COVID-19) pandemic, is a natural extension of PPE evolution. Furthermore, mask wearing by HCPs for all direct patient interactions during healthcare should become

a new standard of care, and mask wearing should be included in the definition of universal or standard precautions.

The COVID-19 pandemic has had a similar impact to that of HIV on the healthcare community, resulting in regimented guidelines,⁴ anxiety, and even associated career burnout.⁵ Early in the pandemic, the CDC issued recommendations that HCPs should wear well-fitting facemasks during patient care. Because of fear of disease acquisition and spread, compliance with masking in most institutions was high. It quickly became obvious that severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) could be transmitted from symptomatic, pre-symptomatic and asymptomatic people. Thus, implementing precautions only after identifying infected persons could not effectively mitigate transmission risks. To curb infections among HCPs due to workplace exposures, large health systems implemented universal masking for HCPs in all clinical settings and observed a notable decline in healthcare-acquired SARS-CoV-2 infections as a result.^{6–9} On September 23, 2022, the CDC issued updated guidance noting that, “When SARS-CoV-2 community transmission levels are not high, healthcare facilities could choose not to require universal source control.”⁴ We disagree with this new recommendation for several reasons, among them: (1) Europe is now seeing an uptick in COVID-19 cases and the United States has almost invariably followed such an increase in Europe with an increase of our own; (2) non-COVID-19 respiratory infections are presently epidemic throughout our country; (3) we believe the experience in US communities suggests that, once masks are no longer required, reinstating source-control masking will be challenging; and (4) as we move indoors and enter the months-long respiratory virus season, we are inevitably going to experience increases in respiratory infections in patients and staff, in addition to COVID-19 surges.

Masks interrupt both patient-to-provider transmission and staff-to-patient transmission (ie, source control).⁸ Both occupational and iatrogenic spread of SARS-CoV-2 have been exceedingly rare when staff were compliant with mask wearing.⁹ The practice of

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Table 1. Pathogens and Syndromes With Outbreak Potential Whose Transmission is Interrupted by Mask Wearing as Part of Standard Precautions

Pathogens/Syndromes	Examples
Viruses	Influenza
	Respiratory syncytial virus
	Rhinovirus
	Adenovirus
	Parainfluenza virus
	SARS-CoV-1
	SARS-CoV-2
	MERS-CoV
	Endemic enteroviruses and coronaviruses
	Rubeola (measles)
	Mumps virus
	Rubella virus
	Varicella zoster virus
	Monkeypox
Bacteria	<i>Bordetella pertussis</i>
	<i>Corynebacterium diphtheriae</i>
	<i>Neisseria meningitidis</i>
	Group A <i>Streptococcus</i>
Mycobacteria	<i>Mycobacterium tuberculosis</i>
Syndromes	Bronchiolitis
	Croup

Note. SARS-CoV-1, severe acute respiratory coronavirus virus 1; MERS, Middle East respiratory coronavirus.

universal masking during the COVID-19 pandemic interrupted SARS-CoV-2 transmission in healthcare settings⁷ but also had the unanticipated benefit of nearly eradicating transmission of other healthcare-associated respiratory diseases, including influenza, pertussis, tuberculosis, measles, mumps, etc.⁶ Universal masking is a horizontal infection prevention strategy that prevents transmission of many pathogens that are spread via the respiratory tract. (Table 1). Patients hospitalized with such respiratory infections can transmit infection to HCPs and other patients. These infections may be serious and even life-threatening for hospitalized immunosuppressed patients. As noted, source-control masking mitigates risks for transmission of these pathogens. The dramatic decreases in healthcare-associated respiratory infections that were temporally associated with source-control masking argue strongly for its continuation.

Despite successes in healthcare and community settings where nonpharmaceutical interventions, particularly masking, coincided with a global reduction in respiratory viral infections, universal masking has been slowly phased out in nonhealthcare settings. This phase-out has led to increased calls for discontinuing masking within healthcare settings, as is evidenced by the recent CDC interim guidance.⁴ We believe that, because of the heterogeneity among clinical sites (ie, acute care, emergency services, long-term care, and hospice) as well as differences in population demographics and the concentrated presence of immunocompromised

people in healthcare settings, community standards for infection prevention are not applicable to healthcare. The high numbers of people with or without known infections moving through clinical settings has led to regulatory guidelines that support the use of engineering controls, hand hygiene, and PPE to prevent pathogen transmission to patients and HCPs. Patients expect reasonable precautions that create safe standards in the clinical care environment. In our opinion, when coupled with aggressive management of ‘presenteeism,’ HCPs donning a mask for all patient care interactions optimizes the level of cross protection in clinical settings.

Now in our third year of experience with universal masking during the COVID-19 pandemic, healthcare leaders are at a pivotal point at which mask use by HCPs should be codified into the definition of standard and universal precautions and should not be based on seasonal respiratory viral patterns, another COVID-19 surge, or the next pandemic. We believe that universal source-control masking during patient care interactions should become the ‘new normal’ for all healthcare institutions and should become an integral component of ‘standard precautions.’ Recognizing the shift in “universal” precautions may alleviate past mistakes and propel our concept of standard precautions into a future that is better prepared for emerging and highly transmissible pathogens.

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