



Contents lists available at ScienceDirect

American Journal of Infection Control

journal homepage: www.ajicjournal.org

Editorial

Ideal or real: A call to harness infection prevention education and resources through the lens of equity, inclusion and hygiene poverty

Shanina C Knighton PhD, RN, CIC ^{a,b,*}^a Association for Professions in Infection Control and Epidemiology, Center for Research, Practice and Innovation, Arlington, VA^b Case Western Reserve University, Frances Payne Bolton School of Nursing, Cleveland, OH

There is a lack of attention given to research on infection prevention and control and practical guidance among people and their lives outside of health care settings, especially in impoverished communities where people live, work, and play. To stop the spread of COVID-19, we must be inclusive and ensure easy and equitable access to basic hygiene resources, tools, and best practices—starting with communities that are most vulnerable due to systemic inequities. In health care, there have been tremendous advancements in infection prevention and control. However, a unilateral approach of guidelines and recommendations for best practices in hospital settings are not sufficient, inclusive, and equitable for community and home settings. COVID-19 reminds us all how brittle our health care system can be and how interconnected health care is to society and public health, in general.

Public health efforts emphasize the impact that environmental cleanliness, and both public and personal hygiene has on reducing the spread of infections. In an era in which access to personal "cleanliness" and a public health infrastructure are assumed in the United States, one of the wealthiest countries, hygiene poverty—the inability to afford everyday products such as detergent, toothpaste, soap, menstrual products,¹ and deodorant is rarely addressed as a necessity to quality of life.² In fact, government initiatives waive tax for necessities such as food, but not items to maintain adequate personal hygiene and environmental cleanliness. Even prior to COVID-19, hygiene poverty was not overtly defined as a public health issue, less known as an infection prevention and control issue. However, the interactional relationships that exist such as the consequences of bad personal hygiene, poor living conditions, and work conditions can lead to infectious diseases and poor health outcomes. In the current phase of the pandemic, the disruption of supply chains leading to scarcity of everyday hygiene products, human costs continue to be rooted in infrastructural inequities rooted in the intersectionality of biases such as classism, racism, and sexism. Consequentially, despite widespread educational and practical information provided during COVID-19, feelings of helpless and hopelessness set in among socially and socio-economically disadvantaged groups. Most recommendations do not account for the inequity of resources to meet basic

hygienic needs necessary for proper infection prevention and control outside of health care settings.

Infection prevention and control recommendations on topic areas such as mask use, hand hygiene, laundry, and high touch surfaces are important. However, advice given does not always match the real-world experience for disadvantaged groups who are likely to lack basic hygiene resources such as soap, detergent, shampoo or toothpaste to carry out the tasks. For example, essential workers with low-income jobs such as nannies, homecare aides, and grocery store workers will go to work without adequate personal hygiene (eg, clean uniforms, dental hygiene, groomed hair) as they are less likely to have money for resources or a sufficiently accumulated bank of paid time off to tend to their personal care. In fact, about 46% of people in the United States put more than 30% of their income towards housing and of that 23% of people spent 50% of their income on housing.³ Unfortunately, this leaves many people with limited financial resources to make hard decisions about their health, food, and transportation which makes essentials such as body cleansers, deodorant, detergents and dish soap seem optional.

HYGIENE IS ESSENTIAL, NOT OPTIONAL

Science dating back to the Crimean war shows us that materials for personal and environmental use are essential to healthy living.⁴ However, during peak moments of COVID-19 in many communities where inequities exist, there was and continues to be, a lack of economic stability and access to personal hygiene and cleaning materials. For example, the incarcerated population lacked prevention guidelines, masks, adequate hand hygiene materials and experienced some of the largest outbreaks. It is well established that hand hygiene is the single most important way to prevent the spread of infections, however, soap and water as well as hand sanitizers that are safe or have adequate levels of alcohol and lotion to restore moisture are not always accessible or affordable. Another example is poor water quality in lower income communities. This coupled with a lack of cleaning supplies increases the risk for mold, pests and consequential illnesses. A person's inability to clean the skin properly can cause more than body odor as it can also lead to clogged skin pores, abscesses, boils and cysts that can increase the risk for infection.

Cleanliness of laundry is a necessity and can be a health hazard if not done. However, many households lack adequate resources

E-mail address: sckresearch@gmail.com (S.C. Knighton).

including detergent to clean their laundry. When we think about essential workers, who work long hours, sometimes working back-to-back shifts to cover food and shelter, maintaining clean uniforms can be a daunting task. Access to laundry facilities or having laundry appliances seems ordinary. However, for households that do not have these machines leads to washing laundry items by hand. If someone is able-bodied, washing clothing by hand can be tedious, time consuming, and physically demanding. Furthermore, the drying process requires relying on space to dry the clothing, where in some cases is dependent on weather and safety out of doors. Regular maintenance to items such as body towels, jackets, and blankets are some of the hardest items to clean by hand if someone had to take this route. It is also assuming that individuals have access to a bathtub to clean their items. There still is no guarantee that harmful germs are being removed.⁵ Research shows that children miss school days due to not having clean uniforms to attend⁶ and it is also known that the carriage of pathogens on uniforms can transmit germs, thus leading to cross contamination to the body or mask and even into one's home. If the financial means are there to purchase materials such as surface cleaners and disinfectants or even laundry soap—living in a food desert or having stores that carry these materials nearby are less likely in lower-income communities. Hygiene poverty is rampant in the United States hence items such as deodorant, underwear, and menstrual products in large box stores in certain neighborhoods are typically stored in locked display cabinets due to high instance of theft. The consequence of theft is stores shutting down and further propulsion for a lack of access to other essential items.

NOT ALL RECOMMENDATIONS ARE NOT CARRIED OUT EQUAL INCLUDING MASK USE

COVID-19 advice such as “make sure you launder or wash your mask daily,” “wear disposable masks,” or “wear layers of masks” is helpful advice provided you have the financial means and access to do so. However, multiple factors can inhibit someone's ability to protect themselves with a mask safely such as a lack of soap and or water to clean masks daily or money to buy disposables. Many household budgets already strained financially not only had to provide masks for themselves, but also for their children as they returned to settings where they live, work, and play. Situations such as these would cause someone to have to wear the same mask repeatedly and in some instances for essential nonhealth care workers, their outward contact with the public innately would increase the risk of their masks being exposed to germs at similar rates as essential health care workers. Another example, is that while most states expectation was for children to wear masks daily during school, in daycares and in enrichment centers, some were under resourced and could not provide students with clean masks. Alternatives for maintaining clean

masks outside of health care settings still require the purchase of sanitation resources. During the pandemic households did not account for the extra use and laundering of masks and unfortunately relief funding was not initially allocated towards this area. In distinguishing what is ideal versus what is real, empowering people to rotate their masks, understand how to store them and handle them are examples of home-based practical guidance needs for people unable to afford resources such as additional masks or soap.

HYGIENE EQUITY IS ESSENTIAL TO INFECTION PREVENTION AND CONTROL

The lack of realistic guidance that accounts for inequities, such as financial and physical access to personal hygiene and cleaning supplies, is to blame for the detrimental consequences and rampant spread of the virus in poverty-stricken communities and settings. Furthermore, the intersectionality of race, ethnicity, gender, sexual orientation, occupation, and environmental exposures as it relates to poverty hygiene and infection prevention and control, deserves further investigation. It is important to make guidelines more inclusive of the needs of people in impoverished environments other than health care settings that influence their health. As the Association for Professionals in Infection Control and Epidemiology is impactful in advancing infection prevention and control, celebrates its 50th year, and as the American Journal for Infection Control celebrates its 50th volume, it is important to think through what the next 50 years will look like. As the attention and focus is shifting to long-term care facilities, such as assisted living and nursing homes, home health services, outpatient services and community-based health it is essential to think through ways that under-resourced communities should practice infection prevention and control in their day to day lives.

References

1. Sebert Kuhlmann A, Peters Bergquist E, Danjont D, Wall LL. Unmet menstrual hygiene needs among low-income women. *Obstet Gynecol.* 2019;133:238–244.
2. Study reveals US families struggle to afford basic needs | Feeding America. Accessed August 24, 2022. <https://www.feedingamerica.org/about-us/press-room/new-study-reveals-many-american-families-struggle-to-afford-basic-personal-care-items-and-household-goods>.
3. GROSS RENT AS A PERCENTAGE OF... - Census Bureau Search. Accessed August 24, 2022. <https://data.census.gov/cedsci/all?q=GROSS%20RENT%20AS%20A%20PERCENTAGE%20OF%20HOUSEHOLD%20INCOME%20IN%20THE%20PAST%2012%20MONTHS>.
4. Fee E, Garofalo ME. Florence nightingale and the crimean war. *Am J Public Health.* 2010;100:1591.
5. Reynolds KA, et al. Quantifying pathogen infection risks from household laundry practices. *J Appl Microbiol.* 2022;132:1435–1448.
6. Supporting the whole child with access to clean clothes | Teach for America. Accessed July 13, 2022 from <https://www.teachforamerica.org/stories/supporting-the-whole-child-with-access-to-clean-clothes>.