The Invisible People Behind Our Masks

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In response to widespread shortages of personal protective equipment (PPE) that have plagued coronavirus disease 2019 (COVID-19) response efforts, hospitals in the United States have developed innovative PPE optimization strategies. Coupled with increased industrial production, these interventions have helped sustain our PPE supply, allowing medicine to continue saving lives while minimizing harm to clinicians. Unfortunately, while combatting COVID-19, our health care system, like those elsewhere, may be inadvertently relying on PPE supplies linked to forced labor. Though this is a global issue, it is particularly relevant in large economies like that of the United States given the magnitude of their PPE demand.

Recently, PPE has become not only a vital and conspicuous addition to our wardrobes but also one that can help draw our attention to society's deep-seated and unwitting reliance on forced labor. Forced labor, involving severe forms of exploitation and limitations to workers' freedom, has long been recognized as an endemic problem in global supply chains. Like other global buyers, U.S. hospitals increasingly rely on medical supplies sourced from around the world, including countries where production lines are not immune from forced labor. As we continue fighting COVID-19, medicine must also reflect on how recent increases in supply and demand have likely exacerbated the prevalence of forced labor in global PPE supply chains. For example, in July 2020, a *New York Times* investigation revealed an explosive increase in PPE manufacturers in China (1), many of which exploit Uighur forced labor and sell PPE to U.S. customers.

Approximately 25 million people worldwide are currently trapped in forced labor (2). Amid the global recession created by COVID-19, that number is likely to increase because those who have lost jobs in the informal economy are now at increased risk for falling into forced labor as they struggle to survive (3). Forced laborers endure a harsh existence, regularly working 80 or more hours a week in unsanitary and frequently sweltering factories prone to fire and deadly accidents. Such dismal working conditions have been documented in the production of surgical instruments, gloves, scrubs, masks, and many other hospital necessities in such countries as India, Malaysia, Mexico, Pakistan, Sri Lanka, and Thailand (4).

In our unprecedented efforts to rapidly secure large quantities of PPE, regulators have been inconsistent in addressing the unsettling truths about where some of it may originate. For example, Malaysia-based Top Glove, the world's largest rubber glove manufacturer, has been repeatedly accused of employing forced labor practices against migrant workers, including withholding wages, confiscating passports, and working with recruitment firms that use debt bondage to secure employees for clients (5). In July 2020, because of these allegations, U.S. Customs and Border Protection (USCBP) barred the importation of rubber gloves produced by Top Glove. Top Glove is now appealing the ban, and the company saw a 20-fold year-over-year increase in profits during the first quarter of fiscal year 2021 (6). This intervention by USCBP contrasts with its March 2020 decision to lift a ban on gloves produced by Malaysian firm Wembley Rubber Products (WRP), originally imposed after they were discovered to be products of forced labor (7). Although USCBP now asserts that WRP has ended forced labor practices, the timing of the ban's repeal raised suspicions among activists, who believe that the risk for forced labor among WRP's migrant workers remains high. And when the U.S. Food and Drug Administration launched an emergency approval process for Chinese PPE suppliers in April 2020, Build Your Dreams—previously linked to Uighur forced labor—was the first company approved, subsequently securing a billion dollar contract with the state of California (8).

Although forced labor clearly exists, we often cannot reliably or consistently assess its magnitude because of well-known challenges related to traceability and transparency in global supply chains (9). Limitations notwithstanding, we cannot overlook the evidence of forced labor's presence in our medical supply chains, even with the current unprecedented demand for PPE. In our view, the ends do not justify the means. Although the medical field must do everything possible to save lives, it does not have to do so by endangering the lives of others. We cannot expect to change the structure and labor relations of global medical supply chains overnight, but this should not preclude thoughtful discussions about the problem and possible solutions.

International conventions forbidding forced labor already exist. The International Labour Organization (ILO) has pursued the eradication of forced labor since the 1970s and renewed its commitment to this goal in 2016 (10). However, many countries in which this immoral practice thrives have refused to adopt these conventions, and compliance is often lax in those that have because of limited enforcement. Until the ILO conventions become enforceable international treaty systems, a useful cessation approach may be to require accountability from governmental procurement processes and those of large corporations, in line with the United Kingdom's Modern Slavery Act. Though far from perfect, this law requires businesses to make their forced labor eradication efforts public and could be a model for new U.S. legislation, particularly if involving mandatory responsibility in cases of criminal negligence. And while legislative strategies are important, governmental and corporate procurement initiatives may be equally influential. As the cornerstone of the world's largest medical device market, the

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U.S. health care industry is uniquely positioned to catalyze change on this front by wielding its vast economic might.

The fragmented, nonnationalized nature of U.S. health care complicates efforts to address forced labor in its supply chains through collective action, but there are still opportunities for meaningful intervention. U.S. hospitals can make changes immediately by buying PPE from suppliers already monitoring their supply chains or using traceability-enhancing technology and transparent labeling. By negotiating for improved worker protections, requiring evidence that medical supplies are ethically sourced, and working with advocacy organizations (such as the Worker Rights Consortium) to audit manufacturing facilities, hospital systems and large purchasers can significantly improve the lives of those whose voices are being drowned out by the whirring machines of the world's sweatshops.

Although hospitals are best positioned to eradicate forced labor from their supply chains, overcoming the institutional inertia that so often hampers progress will require that professional organizations as well as individual patients, administrators, and clinicians demand accountability. Medical professionals can help by raising awareness of these issues in the workplace, supporting initiatives to optimize existing PPE stock (11), and encouraging hospital leadership to consider supplier adherence to ethical labor standards when purchasing medical supplies (12). Though some may worry about cost increases arising from these interventions, evidence indicates that these concerns are unfounded in the long term (4).

If medicine truly wants to bring its actions in line with its oath to do no harm, it can no longer turn a blind eye to where the tools of its trade come from. To contain the human cost of the pandemic, there is no doubt that we should maximize effective use of PPE, but we must also ensure better work practices for those who enable us to wear it in the first place.

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