Anti-infective drug shortages pose threat to public health and patient care

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Shortages of key drugs used to fight infections represent a public health emergency and can put patients at risk, according to a review published in Clinical Infectious Diseases and available online. Frequent anti-infective shortages can substantially alter clinical care and may lead to worse outcomes for patients, particularly as the development of new anti-infectives has slowed and the prevalence of multidrug-resistant pathogens is increasing.

Of the 193 medications unavailable in the U.S. at the time of the analysis, 13 percent were anti-infective drugs, the authors found, led by Marc Scheetz, PharmD, and Milena Griffith, PharmD, from Midwestern University Chicago College of Pharmacy and Northwestern Memorial Hospital in Chicago. "Anti-infectives often represent irreplaceable life-saving treatments," the authors noted, and hospitalized patients are particularly vulnerable in an era when such shortages often last months and are occurring more frequently.

First-line treatments for herpes encephalitis, neurosyphilis, tuberculosis, and enterococcal infections, among others, have been hit by shortages, forcing physicians to use other drugs that may not work as well, the authors found. For example, the current shortage of the intravenous form of sulfamethoxazole/trimethoprim, a first-line treatment for Pneumocystis jiroveci pneumonia since the 1980s, may result in adverse outcomes for patients with severe disease.

Although the root cause of drug shortages can be hard to determine-current U.S. law does not require manufacturers to disclose such details-the authors point to several supply-side issues that play a role: procuring raw materials, processing, distributing, regulatory compliance, market shortages due to epidemics, new therapeutic indications, and perceived shortages.

Multidisciplinary stewardship programs that support the appropriate "selection, dosing, route of administration, and duration of antimicrobial therapy" can help front-line clinicians when a first-line anti-infective drug is in short supply, Scheetz said. Hospitals should also develop strategies that anticipate the impact and extent of drug shortages, as well as identify therapeutic alternatives that mitigate potential adverse outcomes.

Enhancing oversight by the Food and Drug Administration through congressional legislation may also be needed to identify and correct shortages of life-saving anti-infective drugs, conclude the authors, who describe recently introduced legislation on this topic. "Let your members of Congress know that addressing this issue is important for the proper care of patients," Scheetz said.

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