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## As You Were Saying ...Drug shortages plague hospitals

Recently, a solidly middle class, well-educated woman could not receive a medication that she needed to treat her life-threatening condition. She lived in Boston, had good insurance, and excellent “access to care” — in fact, she was hospitalized at the Massachusetts General Hospital and had a multidisciplinary team of nearly 20 physicians, including myself, caring for her. Her problem was a national drug shortage.

By the time I met her, she was just beginning to turn the corner of her very complicated hospitalization. But having not been able to tolerate food for several days, she was now suffering from Refeeding Syndrome, a condition characterized by sudden electrolyte shifts that if untreated can lead to death. (It was first described during World War II, when malnourished American POWs liberated from Japanese concentration camps fed too quickly suffered fatal consequences.)

When I assumed her care, her phosphate levels were dangerously low. There are only two FDA-approved companies that produce and sell intravenous phosphate, and both have recently suffered manufacturing problems. The result has been a nationwide shortage. Faced with a limited supply of a precious resource, the hospital’s pharmacists had to ration what they had left. My patient could not receive the medication until she reached truly critical levels two days later.

I called the pharmacy and pleaded once again to release intravenous phosphate. An hour later, the drug was hand-carried to us. Her heart stabilized soon after her infusion.

The last several years have been marked by extraordinary drug shortages that have received little notice outside the health care industry. Today, nearly 100 drugs are in shortage. These are not esoteric medicines that collect dust and expire on a pharmacist’s shelf unopened. They include some of the most commonly used medications in the hospital, such as intensive care unit drugs for maintaining blood pressure in critically ill patients, cancer drugs for both adults and children, and specialized electrolyte solutions like the one my patient required to stabilize her heart.

Most of the drugs that are unavailable are solutions formulated for intravenous, intramuscular or spinal delivery, which are difficult and costly to make. Because they are usually generic, they offer limited profitability for manufacturers. A stopgap that physicians have relied on for years has been the use of small private compounding pharmacies to fill the supply gap. But the 2012 New England Compounding Center scandal, which claimed the lives of 64 people and infected hundreds more, reminded the nation of the limits of such an approach. In many cases physicians have improvised to make up for the drug shortages, often by resurrecting older drugs. However, these drugs have usually been abandoned for good reason, because they are less safe or efficacious.

My mother, who trained as a physician in Poland in the 1980s, often spoke of how her cancer patients had their chemotherapy delayed because their drugs were unavailable due to manufacturing shortages in the Soviet Union. It is a marvel to me that, 30 years later, at one of the world’s most prestigious hospitals, I face the same dilemmas she did. Having to tell patients that we have dumbly “run out” of a medication has been one of the most difficult conversations I have experienced during my residency training. It is a scenario I once imagined would take place in a backwater republic, not in a country that is the global leader of medical discovery. For the safety of our patients, the era of drug shortages must end.

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