



Impact of Injectable Opioid Shortage and Update on Small-Volume Parenteral Solution Supplies Survey Report

Survey conducted April 2018

ASHP surveyed its members to assess the recovery of the small-volume parenteral (SVP) solution shortage and to assess the impact of the acute shortage of injectable opioids, including morphine, hydromorphone, and fentanyl. The survey was informal and nonscientific, and it was not designed for statistical analysis. The survey contained 16 questions, remained open for responses for nine days, and garnered 343 responses. Important findings from the survey are presented below.

Key Findings

- 98.4% of respondents have experienced severe or moderate shortages of morphine, hydromorphone, and fentanyl.
- Most respondents indicated their hospital is managing the shortage by switching to oral opioid medications, restricting the use of injectable opioids, prioritizing patients based on clinical need, and converting to non-opioid medications.
- Among strategies to mitigate the impact of the injectable opioid shortage, respondents estimated procurement of products through a 503B outsourcing facility to be more costly than using alternative therapy or repackaging available products.
- 86.4% of respondents indicated they are still affected by the small-volume parenteral (SVP) shortage, which is down from 99.1% during a previous survey in November 2017.

Participants

- There were 343 respondents representing hospitals of various sizes:
 - Small hospitals (< 200 beds): 40.8%
 - Medium hospitals (201-500 beds): 36.2%
 - Large hospitals (> 500 beds): 19.2%
 - Other (not a hospital setting): 3.8%

Injectable Opioids (Morphine, Hydromorphone, Fentanyl)

- 98.4% of respondents indicated that their hospital has been affected by the injectable opioid shortage:
 - 96.2% of respondents indicated that the shortage has been severe (67.8%) or moderate (28.4%).
 - Severe was defined as "has impacted daily operations and patient care."
 - Moderate was defined "has been a problem but not yet impacted patient care."
- The most common responses to the impact on patient care were as follows:
 - 74.4% converted patients to oral opioid medications.
 - 55.7% implemented restriction protocols on injectable opioids.

- 51.9% prioritized patients based on clinical need
- 48.1% converted patients to non-opioid injectable medications
- At the time of the survey, the injectable hydromorphone shortage was the most severe: 19.6% of respondents indicated they were out completely, and 38.9% indicated they had only 7 days' supply or less on hand.
- Injectable fentanyl was least impacted, with only 1.9% indicating they were out completely and 44.8% indicating they had greater than 14 days' supply on hand.
- The most common strategies institutions have used to mitigate the shortage of injectable opioids included the following:
 - 81.6% have purchased vial sizes or concentrations not normally stocked.
 - 58.6% have centralized inventory of injectable opioids, removing them from dispensing cabinets or other decentralized locations.
 - 47.5% have repackaged injectable opioids from larger vials or syringes.
- Many hospitals reported increased costs associated with strategies to mitigate the impact of the injectable opioid shortage:
 - 88.5% reported increased costs associated with obtaining products from a 503B outsourcing facility.
 - 72.6% reported increased costs associated with using alternative therapies, including intravenous acetaminophen or intravenous ibuprofen.
 - 88.6% reported increased costs associated with repackaging multi-dose vials into smaller sizes, including labor and wasted products.

Update on the SVP shortage

Respondents indicated that they are still impacted by the shortage of SVP products. Respondents to the April survey did not rate the shortage as currently being more severe than did respondents to the November survey. The overall peak severity of the SVP shortage was noted to be higher than either of the points in time captured by the November and April surveys.

- November 2017 severity rating responses:
 - 61% severe
 - 35.3% moderate
- Rating of the SVP shortage when it was most impactful to their practice:
 - 75.6% severe
 - 22.6% moderate
- April 2018 severity rating responses:
 - 34.1% severe
 - 36.5% moderate

Other Shortages

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- Other notable shortages indicated by respondents during the previous three months included the following:
 - Sterile water for injection (85.7%)
 - Potassium chloride premix bags (74.6%)
 - Emergency drugs used in cardiac arrest (65.6%)
 - Ketamine (59.8%)
 - Syringes, syringe caps, and other supplies (59.8%)

Pharmacists in hospitals and health systems are working every day to devise strategies to deal with the constant flow of ongoing and new shortages. ASHP and the University of Utah Drug Information Service have created guidance documents to support efforts to mitigate the impact of the SVP shortage and the injectable opioid shortages.

The SVP shortage guidance document can be found at <https://www.ashp.org/Drug-Shortages/Shortage-Resources/Publications/Small-Volume-Parenteral-Solutions-Shortages>. The injectable opioid shortage guidance document can be found at <https://www.ashp.org/Drug-Shortages/Shortage-Resources/Injectable-Opioid-Shortages-FAQ>.

For more information, contact ASHP's Center for Medication Safety and Quality at quality@ashp.org.

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