Monitoring hazardous drug surface contamination in a hospital setting

A multidisciplinary panel of healthcare providers met at the 2020 Safe to Touch conference and developed a set of consensus statements regarding surface contamination monitoring for adoption by stakeholders in the drug supply chain, policy, and healthcare arenas.

Implement a plan and policy

- **Create a surface contamination monitoring plan**

  Studies have demonstrated the widespread occurrence of hazardous drug (HDs) surface contamination in healthcare facilities. Creation of a plan emphasises patient and employee safety as a priority.

- **Establish surface contamination monitoring policies**

  Healthcare settings where HDs are handled should develop a policy tailored to their needs. The policy should establish areas of potential HD surface contamination, the individuals responsible for monitoring, the frequency tests and how to interpret test results.

- **Develop a setting-specific wipe sampling plan.**

  Wipe sampling should be conducted every 6 months, with monthly checking, to assess HD handling and the effectiveness of clean-up practices. A wipe sampling plan is useful for determining baseline contamination, screening for occupational exposures, and evaluating cleaning procedures.

- **Employ qualitative and quantitative tests**

  Qualitative testing is recommended when rapid results are needed to determine the presence or absence of an HD. Quantitative tests provide an actual amount of the detected HD, but results may take weeks to receive.

- **Report test results**

  Laboratories should convey test results in a standard format. Reports should include the name of the HD(s); a description of the location of sample(s); the limits of detection and quantification; data on results over time; and data comparing results of different clients.

Practice routine testing and reporting

Establish a culture of safe practices

- **Reduce surface contamination with administrative and engineering controls**

  Administrative controls include education and training, limiting access to areas containing HDs and the time workers handle HDs. Engineering controls include biological safety cabinets, compounding aseptic containment isolators, and closed system transfer devices.

- **Mitigate HD spills and emphasise a commitment to decontamination**

  Develop a plan for the prevention and clean-up of HD spills including who is responsible for clean-up, proper procedures, and information on spill kits. Spills should be documented, and an institutional reporting system should be maintained.

- **Implement safety practices throughout the HD handing process**

  HD manufacturers should state the hazardous nature of their products on package labels. Healthcare institutions should identify HDs that require safe handling precautions and integrate HD statements into medication workflow systems.

- **Conduct further research on HD surface contamination**

  Comparative analyses of available HD surface contamination monitoring systems and investigations of exposure limits can provide insight into how to improve surface contamination monitoring. Development of a centralised online database for reporting anonymous surface contamination monitoring data would help evaluate current practices.

- **Recognise barriers to effective HD contamination monitoring**

  Competing priorities for available budget, a lack of clear regulatory standards, and the fear of what a positive contamination result may mean can create barriers to implementing monitoring programmes. Organisations should consider that the costs of inaction may exceed the investment in an effective program.

- **Collaborate to emphasize the importance of HD surface contamination monitoring**

  Collaboration among stakeholders is key in increasing the scope of HD surface contamination monitoring. Stakeholders are encouraged to disseminate these consensus statements to help drive the implementation of necessary plans and policies.

Continuously seek ways to improve

Safe Handling of Hazardous Drugs

Reference: Gabay M, Johnson P, Fanikos J, et al. Report on 2020 Safe to Touch Consensus Conference on Hazardous Drug Surface Contamination. American Journal of Health-System Pharmacy 2021;78:1568-1575. Available at: https://academic.oup.com/ajhp/article/78/17/1568/6196020.