Ampoule Opening Device: Lessons Learned from Incident Study of Sharp Injuries

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Materials & Methods

Identification of common ampoule sizes

Identification of ampoule opening devices to test

Used onsite vendor to procure opening devices based on size needed

- Ampule breaker/collar
- Ampoule Breaker
- Ampule Breaker, Hach
- Sepha Clic Open Device
- SCIENCEWARE® Break-Safe™ Ampule Opener
- SnapIT

Test ampoule opening device to determine ease of use and safety (using empty glass ampoule)

The SnapIT ampoule opening device was deemed the easiest to use by our scientists and best met our safety criteria.

Pros

- Reusable
- Easy to use
- Comes in several sizes
- One-handed ejection directly into sharps container
- Less stress on wrist

Cons

- If top of ampoule is not properly secured in device, it may self-eject after breaking open the ampoule
- Maintenance

Spreading awareness

- Incorporated into Laboratory Safety Training
- MedImmune Gadget Show (2 minute video / campus competition)
- Safety Alert (displayed on internal lab communication screens)
- Stock Room (ensuring item was readily available in the lab supply stockrooms)
- R&D Newsletter (monthly newsletter - topic was injury prevention)
- Safety Fair (hands-on exercise to try ampoule opener)

Results

Six ampoule opening devices from six different vendors were tested using empty amber glass ampoules. A small absorbent pad was added during the procedure which served as an additional protective barrier and assisted with the grip on the glass ampoule.

Key Learnings

- Involvement of impacted staff in investigation and mitigation of unsafe conditions is imperative to sustainable preventative actions and unsafe behaviors.
- Not all safety devices are the same – testing is critical prior to implementation.
- Refresher training is necessary – especially for new safety devices or techniques.
- Ensuring availability of an alternate to the preferred safety device is essential in the event the preferred device is not available.
- Multiple avenues of spreading awareness are necessary – not everyone reads emails.

References


Acknowledgements

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