# Image: Date: June, 2015 RMS Contact: Eric Doland, edoland@nd.edu Safety Safety Contact RMS: Tel: 1-5037

## Description

An undergrad received a needle stick injury to the finger by contacting an exposed needle protruding through the safety cap on a syringe. The needle stick injury occurred after the undergrad placed the safety cap on the end of the needle and needle pierced through the cap. The syringe was used with flammable chemicals. The undergrad immediately notified a fellow graduate student in the lab. Upon sight of blood, the undergrad became light headed and fainted briefly losing consciousness. The graduate student called ND Dispatch and NDFD responded and evaluated the undergrad who was released without further medical treatment.

# Findings

- Undergrad was wearing nitrile gloves while using syringe.
- This task had been performed many times over the past 12 months.
- Use of needles is required for extracting and transferring chemicals under vacuum from extraction vessels into vials.
- Safety caps are placed onto syringe by hand.

# **Root Causes**

- Extracting chemicals from vessels and dispensing into vials requires lab personnel to work with syringes.
- The needle broke through the safety cap because the needles are sharp and the caps are not designed for recapping purposes.
- The needle punctured the undergraduate's finger because needles are recapped by hand.

# **Recommended Actions**

- Implement use of safety caps specifically designed for recapping needles.
- Implement use of duller/blunt needle design.
- Implement use of recapping device to eliminate recapping by hand and minimize risk of needle stick injury (example shown at right).

NeedleSafe II needle uncapper/ recapper and syringe holder shown below.



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