Hypodermic Needles:
Preventing Needlestick Injuries in the Veterinary Environment.

A Paper submitted to the Health and Safety Committee Meeting, 7th October 2010, by Ronnie Soutar.

Needlestick injuries are an inherent risk of handling needles during the course of veterinary practice. Needlestick injuries are common among veterinary personnel. Serious adverse effects, while uncommon, do occur. Clients may also receive injuries in clinics during the course of animal restraint, and at home following prescription of injectable medications or fluids.

Needlestick injuries can occur before, during, and after a procedure before needle disposal, during needle disposal, and after improper disposal (leaving needles in clothing or disposing incorrectly in general waste).

In Human Medicine, there are significant risks from needlestick injuries (HIV, Hep B, Hep C). We do not currently recognize many significant and common zoonotic bloodborne pathogens in animals. It is plausible that infections could occur from inoculation of bloodborne pathogens (certain arboviruses), organisms from the animal’s skin (Staphylococcus spp., Pseudomonas spp.), organisms from fine-needle aspirates (Pasteurella spp., Staphylococcus spp., Streptococcus spp.) or modified live vaccines. Physical trauma can be significant, especially from large-bore needles or severe laceration that results from animal movement during injection or blood collection. Injection of substances such as vaccines, antimicrobials, chemotherapeutics, hormone preparations, euthanasia solutions, and anaesthetics also pose potential risks ranging from local irritation to systemic reactions.

A study of female veterinarians reported adverse effects in 16% of needlesticks. Severe reactions included severe local inflammation, abscess formation, joint infection, localized necrosis, skin slough, local nerve damage, brucellosis, severe allergic reaction, psychedelic experience, bronchial and laryngeal spasm, and miscarriage. Anthelmintics, euthanasia agents, and anaesthetics were more commonly associated with adverse effects. Accidental injection following fine-needle aspiration is also a concern.

Needlestick injury avoidance

- Protective devices such as retractable needles or hinged syringe caps are available but are considered to be prohibitively expensive for the majority of veterinary work. However, they may be considered in high risk situations.
- Do not recap needles unless absolutely necessary. If recapping is necessary, use a one-hand scoop method, hold the cap with a mechanical device such as forceps or use a needle recapping device.
- Ensure convenient access to sharps containers in all areas where needles might be used.
- Promptly dispose of needles into approved sharps containers.
- Never use temporary or unapproved containers for sharps.
- Never try to remove anything from a sharps container.
- Do not fill sharps containers beyond the designated fill limit.
• Do not walk around with an uncapped needle.

• Ensure all needlestick injuries are reported to allow recording of information regarding the circumstances.

• Ensure species which pose a higher risk of zoonotic infection are handled only by experienced personnel.

• Ensure appropriate patient restraint. Poor restraint can endanger not only the person injecting, but also other staff and animal owners who may be assisting.

• Bats and primates should only be handled by personnel vaccinated against rabies and hepatitis B.

**Client Care:**

Clinicians may prescribe injectable medications or fluid therapy, such as subcutaneous fluid or insulin for administration at home by clients. It should be considered that owners have no baseline knowledge of needlestick injuries, needlestick avoidance, and safe sharps handling practices. If clinicians dispense or prescribe injectable treatments, education regarding safe handling practices including safe administration, needle handling, and sharps disposal must be provided and documented.

**One Hand Recapping Technique:**

To safely recap needles, use the "one-hand" technique:

**Step 1**
Place the cap on a flat surface, then remove your hand from the cap.

**Step 2**
With one hand, hold the syringe and use the needle to "scoop up" the cap.

**Step 3**
When the cap covers the needle completely, use the other hand to secure the cap on the needle hub. Be careful to handle the cap at the bottom only (near the hub).

Veterinary Services acknowledge the above information was primarily sourced from:

**Needlestick injuries in veterinary medicine**
J. Scott Weese and Douglas C. Jack
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2465782/