

## GOING NEEDLEFREE, WHAT'S THE POINT?

Jenny Fisher, AS, RVT, VTS-oncology

- Needle stick injuries are common in human and veterinary medicine, with a recent Australian study finding as many as 75% of veterinary technicians admit to sticking themselves with needles. Recently, there has been data suggestive of a complacency in veterinary medicine when it comes to needle stick injuries. Although most of the research that has been conducted on the frequency of needle sticks has mainly been performed utilizing human health care data and disease transmission rates. One of the many reasons thought to contribute to this complacency is the reduced number of zoonotic blood borne pathogens. There is also an increased interest in the possibility of increasing numbers of potential zoonotic pathogens, AKA super bugs. Many veterinary professionals are not even aware of laws in place to protect them in accordance to needle sticks. In 2000, the needle stick prevention act was made into law to assist in educated health care professionals in the benefit of reducing exposure through needle sticks. With additional laws, such as USP 800 which now states there is no acceptable exposure to hazardous drugs, where for years there was an acceptable low level of exposure ALARA.
- Being able to reduce the number of needles in the veterinary practice also requires establishing when and how needles are required and for what procedures can standards be changed. There are many situations that currently offer no other viable option than use of a needle, like placing IV catheters or IM injections. For example, placing intra-venous catheters requires a way to penetrate the wall of the vessel, quickly, aseptically, and painlessly as possible, which a needle is the best and only current option. Once placed inside the vein, a silicone catheter can be guided into place for indwelling use. Intra-muscular injections also require the use of a needle. Many other areas have been identified as situations where the use of needles can be removed. Drug preparations is one of the main areas where the reduction of needles for potential injury or increased waste where needle free systems can be greatly beneficial. For example, multi-dose drug vials require repeat puncturing/coring of the rubber stopper to access the solutions. Many different problems can arise from repeat needle punctures into a vial, including vial pressurization, vial contamination and repeated hub drug loss. Repeated hub loss of drug, over time can add up to be very costly.
- Fluid therapy is another area of veterinary medicine where reducing needle exposure is possible and beneficial. The use of closed systems for t-ports and fluid administration lines are becoming more common and widely utilized. The vital differences in open and closed fluid administration systems have been proven to increase sterility, security and stability of fluid administration sets. Reducing the use of needles leads to a decrease in medical sharps waste, saving money for the hospital. Using needles as fluid administration line “caps” – has shown to increase sharps waste expenses based upon weight.
- With the implementation of needle free safety devices, within human medicine, there was a reported 70-80% reduction in reported needle stick injuries within the healthcare setting. With that evidence, we know that using these devices will likely have the same effect within the veterinary space.
- Reducing needle sticks directly reduces risk of exposure to known and unknown zoonotic diseases. Needle free devices offer a solution to overuse and over waste of needles in veterinary health care. Multi-dose vial adaptors, saline bag spikes, closed system t-ports and closed fluid admin sets are all devices that aid in reducing exposure through needle sticks, providing better care to patients, and moving towards a needle free health care.