**Safety syringe evaluations**

Name of Office: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Names and titles of evaluators:

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We evaluated the two needle safety devices that were available:

* Safe-Mate safety needle that fits the metal dental syringes that are widely

used by dental practitioners.

* The Septodent Ultra Safety Plus XL Safety Syringe is a syringes with needles attached

Dental staff were trained to use the devices in a variety of ways:

* The Septodent syringe had videos were on YouTube showing how to use the syringe.
* The Safe Mate needle system had written instructions only. Evaluators read and

the written instructions and then practiced using the device.

Each device was examined and discussed. One problem was that these are not always available on the market. The Septodent syringe was the only one that we could find consistently on the market.

SafeMate safety needle:

This is a safety needle for metal dental syringes. This is a needle that is intended for routine administration of local anesthetics. It screws onto the metal syringe via a pre threaded plastic hub. It contains a stainless steel needle that is covered with a plastic sleeve. The sleeve is slid back over the syringe and slide forward over the needle when not in use. The needle is disposed of by covering the needle with the plastic sleeve and then unscrewing it from the metal syringe. A syringe with a non-removable hub is preferred when using the needle. We had a few metal syringes with non-removable hubs in the clinic, and tested the product with this type of syringe as well.

Evaluators felt the safe mate needle was easy to assemble, it worked the way it was supposed to, and seemed reliable during use. It was also easy to unlock the mechanism if an additional injection needed to be given.

Several issues surfaced during the evaluation of this device. Evaluators did not feel the quality and sharpness of the needles to be consistent with the top brands of non-safety needles available. It was also not feasible to use when the needle had to be bent because it couldn’t be recapped. When sliding the sleeve off the needle it stuck on the metal hub of the syringe. Another issue was that when he recovered and tried to unscrew the needle the metal hub unscrewed as well. This issue proved to be the most serious as the metal hubs came off when the needle assembly was unscrewed and were often thrown into the sharps containers with the needle. A syringe with a non-removable hub is preferred by the manufacturer, but syringes with nonremovable hubs are no longer available.

The device made it difficult to visualize aspiration of blood into the anesthetic cartridge.

Septodent Ultra Safety Plus XL Safety Syringe:

This syringe is a plastic syringe/needle system. The product uses a one-handed approach for both uncapping and recapping the needle. Two of the syringes broke when being examined. The syringe is easy to assemble and generally functioned as was intended. There are some problems. First, it is more difficult and time consuming to load anesthetic carpules than with a typical syringe. It is also difficult to see aspiration of blood into the carpule. If it is necessary to bend a needle, recapping may be difficult. Evaluators with large hands didn’t feel it was as comfortable to use as a traditional syringe. Once it’s locked into place, it can’t be unlocked, so if you accidently push the sheath too far and permanently lock it and you need to give more anesthetic, you have to get a new syringe.

**Conclusion:**

Neither of the above products was judged to perform adequately to use in everyday clinical practice. All evaluators agreed that the devices added a layer of complication to the injection process without making it safer. So long as one handed recapping methods are used and unsheathed needles are not passed or allowed to remain uncapped during procedures, the risk of stick injuries are negligible.