

Why NMDOH Does Not Recommend the Use of Bleach to Clean Syringes

In recent ECHO discussion, the question of using household bleach to clean syringes was discussed. The NM-DOH Harm Reduction Program does not recommend the use of bleach to clean syringes in order for syringes to be re-used. The recommendation is that participants use a new syringe for each shot.

Now, remembering that we use a Harm Reduction Philosophy approach – we start with the best scenario and then work our way backward based upon many factors, including the individuals, the availability of supplies in an area, and actual practices used by the participants.

So, the best recommendation is ***“One shot – One Syringe”***.

However, we know that people do not always use the “One shot – One Syringe” as recommended. It is not always possible. In the situation where syringes are being re-used (regardless of the reason why), it is better if they are only re-used by the same person. In other words, they still should not share the syringes with other people. In this case, the syringes should still be rinsed out with water (sterile water if at all possible) – room temperature is the best, as too hot can damage the syringe, and cold can cause any residual blood to coagulate.

If this is still not possible (limiting re-use to the same person), and sharing occurs among different people (not recommended, but reality is that we know it happens), then the syringes should be rinsed and cleaned after each use with water (sterile if at all possible).

Why do we not recommend bleach to disinfect the syringes during times when the best scenario is not possible? After all, disinfecting with bleach has been around for a long time, it’s not a new strategy, and is still used as a prevention strategy in different parts of the country.

There are several reasons. First, there is some evidence that bleach is not as effective as originally thought in disinfecting syringes (mostly due to improper methods). Second, residual bleach in syringes can result in inflamed tissue at the injection site. Third, we want to be presenting the same information consistently and in a clear and concise manner. Fourth, the information needs to be presented at a difficulty level appropriate for the participant (language difficulty and complexity). Fifth, this is information which will be passed to others, and it needs to be done in such a way that it is passed correctly and not misconstrued or pieces of information missing when it is taught or shown to others.

Overall, there has not been enough research in this area, and the results are mixed. Some studies show that there is the potential for residual blood to aggregate (clump or clot) and for the interior cells in this clump to be protected from the bleach disinfection (Contoreggi, 1992 and Contoreggi 2000). In addition, the bleach itself, if diluted (at different concentrations) is inefficient in decontaminating syringes (Shapshak, 1994 and Chitnis, 2002).

As reported by Ball and Crofts (2001) in *HIV/AIDS Prevention and Care in Resource-Constrained Settings- A Handbook for the Design and Management of Programs*, Chapter 22 (page 529):

“The evidence for effectiveness of disinfection programs in the prevention of HIV among IDUs is mixed, with some evaluations finding a protective effect and others not.¹⁰ In general, effectiveness relates more to the circumstances in which the bleach is distributed and used—and to how it is used—than to the programs themselves (see below). Messages to IDUs have often been confusing, proposing differing

types of decontaminants and concentrations.¹¹ Disinfection programs are certainly not as effective as needle-syringe programs, and should not be seen as a satisfactory substitute. They are better viewed as a less effective alternative where needle-syringe programs are not possible, or as a second-line strategy to support needle-syringe programs.” (Note – reference numbers in the quote are found in the source material)

So, bleach disinfection is not a new strategy, but the practical use of it is not consistent and is often not effective. This is because participants using a disinfection method are often doing so in difficult situations, and are not able to follow the recommended disinfection process and techniques. There are many articles that state that the proper use of this technique can reduce the risk of HIV transmission (do a search and see what you can find – it’s interesting). In the meanwhile, think about how difficult it would be to do this while on the street:

1. Draw up bleach (full-strength) into the syringe. Make sure the barrel is all the way full.
2. Shake for 30 seconds.
3. Discharge the bleach. Make sure all the liquid is out of the syringe.
4. Draw up sterile water into the syringe. Make sure the barrel is all the way full.
5. Shake for a few seconds.
6. Discharge the sterile water. Make sure all the liquid is out of the syringe.
7. Repeat steps 1-6 at least twice, preferably three times. (Note - this step depends on who you listen to about the “correct” procedure)

PLEASE MAKE SURE TO USE A NEW BLEACH BOTTLE AND STERILE WATER BOTTLE EACH TIME TO AVOID CROSS-CONTAMINATION! THANK YOU!

Basically, bleach will kill most viruses given enough time and the proper process followed. But adherence to the process is inconsistent and because of this, the effectiveness of a disinfection program is greatly reduced. It has also been hypothesized that the residue of bleach after a disinfection process can irritate the tissue at the injection site and increase the potential for infection in the affected tissue at the injection site (Contoreggi, 2000), but this has not been proven (nor disproven by any material I’ve been able to find so far).

Always remember when working with individual participants, they are at many different levels of knowledge, abilities and stages of learning. We meet people where they are. Take that into account whenever engaging in education and other interactions. If the only option is for someone to disinfect their syringes (such as not having access to sterile syringes), make sure they have all the information and they are making the best choices for themselves. Their individual circumstances need to be considered. The issue with HIV is also not the only one to consider. One of the others is that the bleach can cause portions of the syringe to degrade, thus allowing air bubbles or pieces of the degrading syringe to get mixed into the injection. I also did not mention Hepatitis C at all in the discussion, and there was only one article I could find (although I have not yet done an extensive search) with regard to it, and it stated that while bleach was effective at disinfecting for Hepatitis C virus, again, the practice and implementation of the disinfection process is not consistent. (Kapadia, 2002).

Another piece of this discussion is that New Mexico is unique in the delivery of harm reduction services. In many places, syringe exchanges are still illegal, and the difficulties of getting new sterile syringes are tremendous. This is not the case in New Mexico. Even in some places where there are established syringe exchanges, there are often other restrictions, such as limited number of syringes given at any one time (meaning participants may still need to re-use syringes at times). This hampers the access to sterile syringes, and may necessitate the need for other mechanisms such as disinfection programs. Not because they are the best solution (yes, pun intended), but because they are the best option available under the circumstances.

Remember, syringes are made to be used only one time. Repeated use of a syringe can cause barbs and splinters of metal from the needle itself. This can result in vein and other tissue damage including increased scarring, and may increase susceptibility to abscesses because of the tissue damage.

This is not meant to be a complete description of all the reasons for or against bleach being used as a disinfectant; it is simply a summary of some of the reasons. I have not done an exhaustive literature search on the subject, but have included a few citations. There are also many other things to consider when looking at disinfection programs, such as access to bleach and clean water.

Since it has been a topic from a few people, I propose at the next Statewide Harm Reduction Meeting (date to be determined still) we set aside some time to have a discussion about this particular topic. Or, is there another topic that might be more helpful for everyone? (Ideas?)

References

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