

Universal precautions training has been required for all levels of medical care providers for almost 20 years. When I started in the medical profession as an EMT in the late 70s, it was still considered a “badge of honor” to return from an ambulance run covered with blood. It meant you had been on a trauma case, and working hard to save life and limb. Today, that type of exposure would have you running to the infection control section of the hospital for extensive lab work, and possibly starting anti-viral medication if there are any significant breaks in the skin.

Despite this emphasis on personal protection and concern with blood and body fluid contact, I still see the improper use of gloves by everyone from first-aiders to infectious disease and public health specialists. Improper glove use puts both the care provider and their patients at risk for acquiring any one of the many blood-borne illnesses. I learned proper glove techniques while working with radioactive materials. The principles used to keep from spreading radiation also apply to the spread of infectious agents.

Consider the following scenario. You are working as Chirurgeon at a heavy list. You have just returned from making a run to water on the populace, and sit down in the shade to sip some sekanjabin. A young runner comes running up and says, “Good Chirurgeon, your assistance is required in the kitchen!” You grab your quick-go kit, and follow the youth to the feast prep area. You find one of the cooks holding a towel on her left hand. Being the well-prepared Chirurgeon, you pull your rubber gloves out of your pack. While gloving up, you ask all the “what happened” questions, and find out that she was slicing a leek for the soup, and managed to cut her left hand on the palm just below the index finger. You remove the towel, which has a fair amount of blood on it. The wound is only oozing a small amount of blood since the kitchen staff did a wonderful job of applying pressure and elevating the hand. You compliment them on their first aid as you examine the wound. You apply mild traction to the wound margins, and it pulls open easily and starts bleeding again. You can see the subcutaneous fat. Yes, this one is indeed deep enough to require a trip to the ER for stitches. You reach into your pack, moving aside the blood pressure cuff to get to the 4X4s at the bottom. You have the patient apply pressure to the wound. You check for sensation, capillary refill, and movement of the involved hand and are relieved to find all is well. You pull out your pen, and record these observations on the Chirurgeon incident form. You finish by wrapping the hand with a roll of kling. While arrangements are being made for transportation, you complete recording all the information for the incident form. You gather up all the used materials, including the bloody 4x4s and materials. You carefully remove your gloves, place all the contaminated materials in a plastic bag, tie it up, and place it in the trash.

Do you think the blood and body fluids protection used in this scenario was adequate? Gloves were appropriate for the situation, but they were actually used too much! Not something you’d think you’d ever hear from a public health doc, but indeed, this is the most common error I see in glove usage – keeping them on when they should be removed.

In this case scenario, our intrepid Chirurgeon was being very diligent about paperwork, and kept good track of procedures and treatments as they were done. However, the mistake made was writing while wearing gloves. What happened then to that pen? Perhaps it was tucked it back into the tunic, but then later a friend wanted to pass on a reference on the humoral theory of

medicine. While chatting, out comes the pen, and eventually it ends up in the mouth. What about the clipboard? Later in the event, our surgeon picks it up to record that the good Lady Cook has returned from the ER with stitches, bandage, and brand new tetanus shot. But wasn't that clipboard handled with contaminated gloves? Fortunately, our cook carries no blood-borne pestilence, but our hero has non-the-less been exposed to the risk of acquiring disease. If symptoms should occur perhaps even months later, there would be no suspicion that it could be due to Surgeon activities because gloves had always been worn.

To wear gloves properly, they should be donned prior to touching a patient when there is a risk of contacting blood or body fluids. This means anyone who is bleeding, excessively drooling, vomiting, or is soiled with urine or feces. (A sweaty fighter does not pose a hazard from the perspiration alone.) It is prudent to put the gloves on even if there is no visible contamination, because you may well discover a "surprise" during examination and treatment. The gloves should remain on during contact with that person, but you should not touch anything else while wearing these gloves. After the gloves have been in contact with the patient, they are considered contaminated, and anything they touch is contaminated. Do you really want to use your pencil after you have been writing with contaminated gloves on? My pen somehow sooner-or-later always finds its way to my mouth. Or what about the person you just took care of that (unbeknownst to you) works in a nursing home and is colonized with methicillin-resistant Staph aureus? If you touch them and then reach into your kit to get more supplies, you have just transferred some of this most difficult to kill bacteria into your first-aid kit. So the next time you reach into the kit to get a 4x4, you are also pulling out a nasty pathogen (even if you are wearing gloves).

What could have been done better in this hypothetical case? Our friend Surgeon could have enlisted an assistant to record notes and get equipment out of the kit. If there is an apprentice Surgeon, being the assistant is the perfect job for the mentor. If no apprentice is available, there are usually more than enough willing bystanders to lend a hand. If you are on your own, do all the patient care activities, and complete the paperwork after removing the gloves. Sometimes the situation may require taking the gloves off to complete a non-patient-care task, then putting on a new pair to continue treatment.

Universal precautions are a necessity at all levels of medical care to protect both the patient and the caregiver. Training emphasizes wearing gloves, but rarely spends time on how to properly use them. Most people get a warm fuzzy feeling of "I'm wearing gloves, therefore I'm protected," but if not used properly, they may be placing themselves and their patients in danger.

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