Phlebotomy: Safety Engineered Devices

Phlebotomy includes invasive procedures that allows for the collection of blood for testing or donation. This is done by a needlestick to a vein which may be dangerous in the hands of phlebotomist with improper training. Because safety is a priority of the phlebotomist, we're seeking ways that we can improve safety for both the health care worker and the patient when drawing out the blood from the patient. To reduce the risk of infection and injury, we can utilize safety engineered devices that aid in preventing infection and injury. 'Such devices reduce exposure to blood and injuries' (NCBI 1). I propose that in order to help aid phlebotomist in training from injuring people, we incorporate safety engineered devices for assistance alongside proper training for phlebotomist and education consistent with all phlebotomist.

How can we minimize the chance of injury in phlebotomy whether to the patient or to the phlebotomist in a way that allows the phlebotomist to draw blood without any problems? There is a lot of room for error in the healthcare field and what can go wrong will go wrong. Therefore, we need safety precautions in place and safety engineered devices can help. Injuries and risk of infection can affect health care workers because they can become contaminated with any disease that patients carry. Patients are also at risk because of injury and infection. (NCBI 3). Blood borne infections can occur from the needlestick and cannot always be prevented by gowns or gloves. Any contact with patients is immediately a risk of contamination. Treating every patient as if they are infectious is important because you never know what people are carrying. Safety engineered devices can be used and can incorporate universal precautions, avoidance of bodily fluids with protection such as gloves, googles or face shields.

"Safety engineered devices are available on the market, such devices reduce exposure to blood and injuries, However the use of such devices should accompany other infection prevention and control practices and training in their us" (Common). I believe safety engineered devices will aid in the reduction of injuries because technology can be used to our aid along with proper training and they can reduce phlebotomy related injuries due to errors by phlebotomist. Similar to how personal protective equipment is used to avoid bacteria or viruses, safety engineered devices are starting to be used in phlebotomy, this includes syringes that can be slid closed with sheaths or retractable needle systems. These devices are specifically engineered to prevent injury to the phlebotomist or to the patient, acting as another barrier on top of the personal protective equipment that already protects the health care worker from airborne and bloodborne transmissions. This affects health care workers and clinics. Because they are specifically designed to prevent injury in the health care environment, safety engineered devices can be expensive and may not be available to all clinics such as those who cannot afford them. However, clinics are not required to utilize safety engineered devices if they do not feel the need to. "The document goes on to allow for the following considerations in adoption of a safety devices: No one medical device is considered appropriate or effective for all circumstances. Employers must select devices that, based on reasonable judgment: will not jeopardize patient or employee safety or be medically inadvisable; and will make an exposure incident involving a contaminated sharp less likely to occur." (Total Medical).

Safety engineered devices can only do so much in the health care environment. Phlebotomist are responsible for planning ahead, using appropriate locations to draw blood, quality control,

appropriate training, cooperation with patients. (NCBI 1) There is a lot of human errors such as patient misidentification, in the phlebotomy pathway we learned to take the first name and date of birth of the patient to confirm that is the patient we are supposed to be working on. We can use the skills in our pathway to minimize errors. Not only that but in phlebotomy we learn of proper ways to draw blood from patients. We learn what not to do when drawing out blood, which is helpful because we can avoid these wrong actions when we're actually drawing out blood from a patient and not from a fake arm with fake blood. As a matter of fact, we utilize safety engineered devices in our phlebotomy class, ranging from a retractable sharp to a sharp disposable container. We are well aware of their benefits because without them we'd lose one of the many layers of protection that we have in the health care field.

Engineered safety devices have a lot of potential in the health care industry they are capable of minimizing errors where errors can happen. The health care field is not immune to human errors, therefore with safety engineered devices errors can be minimized because they're a barrier that protects both the patient and the health care worker.