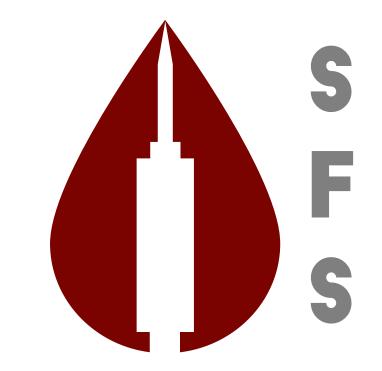


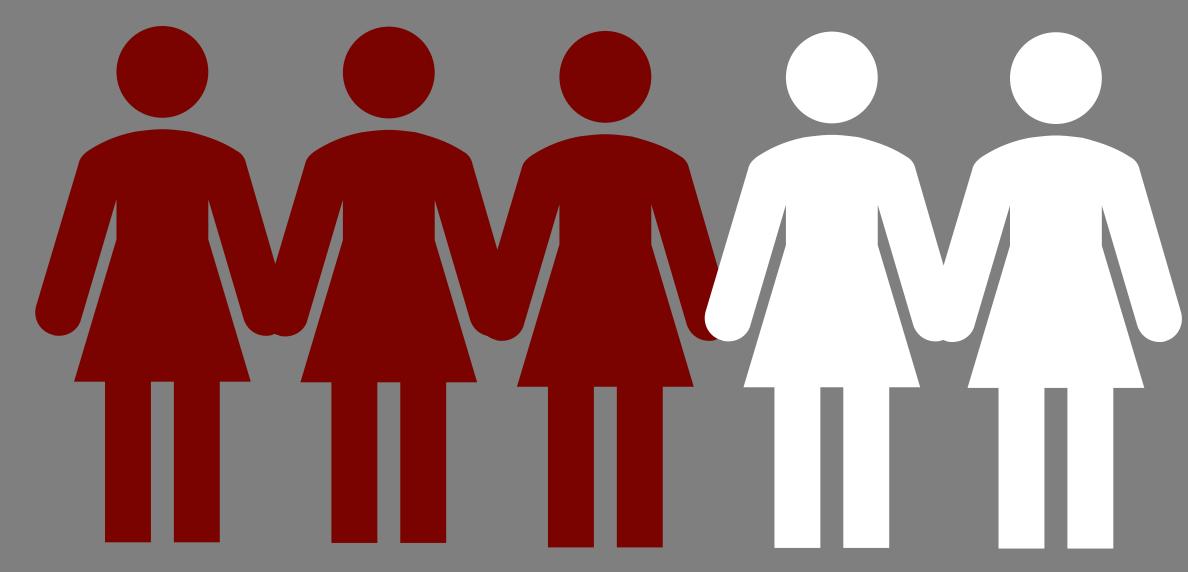
SAFE FROM STICKS

Nathaniel Bajakian (ECE), Kyla Egenberger (BME), & Jessie White (MAC) Advisors: Jill Rulfs (Biology), Helen Vassallo (Management)



NEED: To reduce the incidence of Needlestick Injuries (NSIs) and transmission of blood borne diseases among healthcare workers in Sub-Saharan Africa (SSA)

PREVALANCE OF NSIs IN UGANDAN NURSES & MIDWIVES (1)



Experienced NSI

57%

Have Not Experienced NSI

43%

51.7% of nurses had low level of knowledge on standard precautions in SSA (6)

2 MILLON

NSIs in healthcare workers worldwide result in HBV, HCV, and HIV infections annually (2)

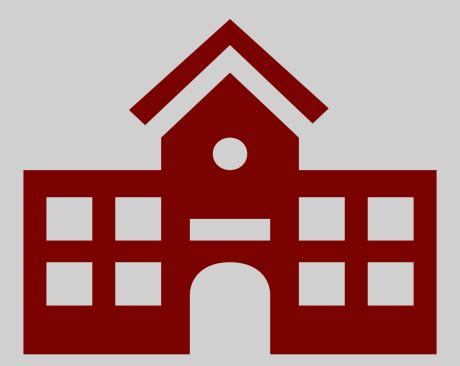
7.5% HIV rate in Uganda (3)

HBV rate in Uganda (4)

HCV rate in SSA

APPROAGH

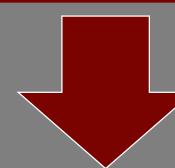
Implement a 5-day training program (Safe from Sticks) at Mulago Hospital to educate in phlebotomy safety



Phase I

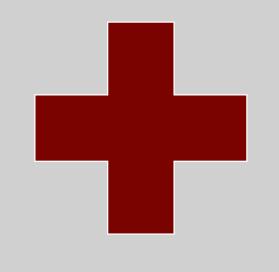


- One day reeducation program
- Needle safety, procedures, disposal



Phase II





Demonstrations and feedback

PROJECIED OUGOMES

Expected 20%-30% decrease in NSIs among medical personnel at Mulago Hospital over 1 year, 50% over 5 years

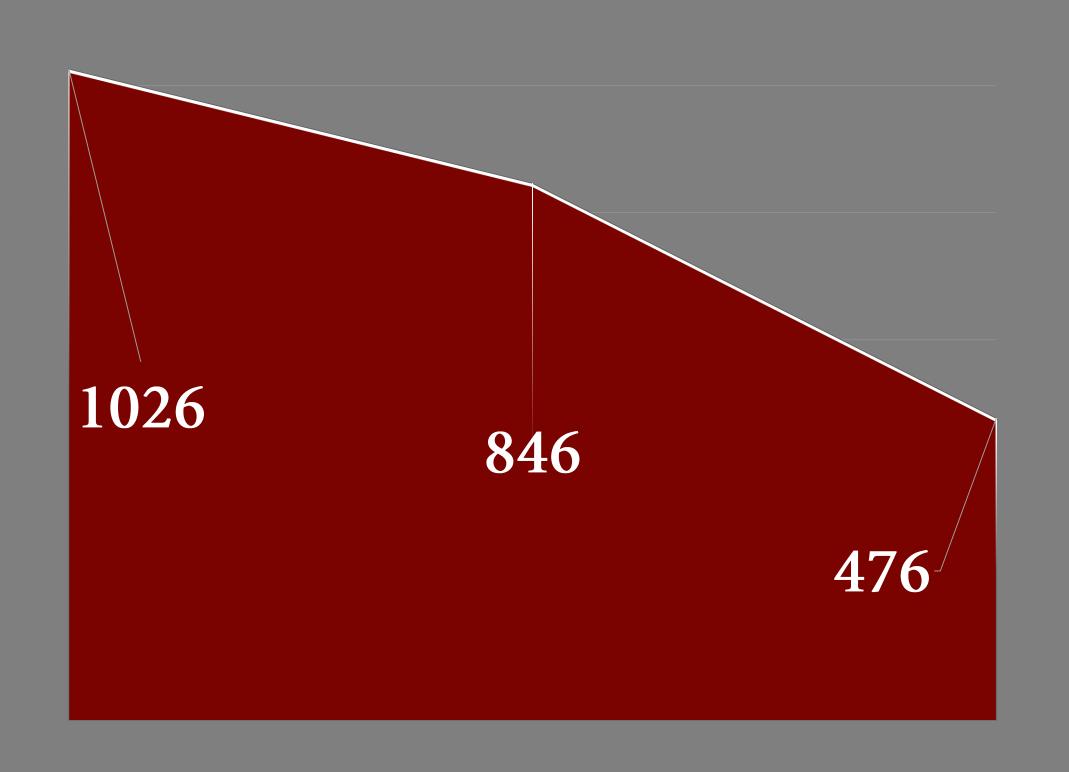
REFERENCES

1) Nsubuga, F. M., & Jaakkola, M. S. (2005). Needle stick injuries among nurses in sub-Saharan Africa. 5) Madhava, V., Burgess, C., & Drucker, E. (2002). Epidemiology of chronic hepatitis C virus infection Tropical Medicine and International Health, 10(8), 773-781. doi:10.1111/j.1365-3156.2005.01453.x in sub-Saharan Africa. The Lancet Infectious Diseases, 2(5), 293-302. doi:10.1016/s1473-2) Adefolalu, A. (2014). Needle Stick Injuries and Health Workers: A Preventable Menace. Annals of Medical and Health Sciences Research, 4(Suppl 2), S159–S160. http://doi.org/10.4103/2141-

3) Uganda AIDS Commission. (2017). HIV Situation in Uganda Calls for Renewed Urgent Action [Press Release]. Retrieved from http://against Hepatitis-B, 15 million people to be vaccinated. Retrieved fromhttp://health.go.ug/content/kabaka-bulemeezi-crown-champion-brashfestcompetition-st-janan-ss-bombo-0

6) Bidira, K., Woldie, M., & Nemera, G. (2014). Prevalence and predictors of needlestick injury among nurses in public hospitals of Jimma Zone, Southwest Ethiopia. International Journal of Nursing and Midwifery, 6(7), 90-96. doi:10.5897/IJNM2014.0135

PREVALANCE OF NSIs



Before SFS

1 Year

5 Years