

OFFICIAL ABSTRACT AND CERTIFICATION

Title: Using Invisible Florescent Dye to Improve Technique for Doffing Personal Protective Equipment

Student\Team Leader: Saachi Jain

School, City, State: University School of Nova Southeastern University, Davie, Florida

Recent reports of health care workers getting infected with possibly lethal organisms like Ebola have highlighted the importance of correct technique for the use of personal protective equipment like gloves, gowns and masks.

The purpose of this experiment is to develop a new technique to reveal unexpected breaches in protection technique and help in teaching the correct use of personal protective equipment using Centers for Disease Control video and slides. A mock patient was covered with invisible florescent dye and and ultraviolet(black) light was used to photograph volunteers after they examined the mock patient. The location of florescent areas on skin surface after patient examination were noted before and after showing volunteers the educational video and poster from CDC. Video recordings of examination procedure and of the doffing (removal) procedure of personal protective equipment were examined to identify the cause for transmission of dye from the mock patient to the the volunteer's skin.

It was observed that even after education, volunteers touched their face with infected gloves while examining the mock patient, touched the infected stethoscope after removing gloves, touched the outside of the gown when removing gown, and touched their wrist when removing the first glove. This analysis was used to develop insights regarding use of personal protective equipment. Invisible florescent dye should be used to objectively test health care workers technique regarding use of personal protective equipment so that they can realize and correct their mistakes and get the confidence to face dangerous infections.

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