The use of a Cyanoacrylate based skin barrier* in the protection of the skin around a tracheostomy

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INTRODUCTION
The creation of a tracheostomy to ease breathing is associated frequently with leakage of fluids onto intact skin around the insertion point. Such constant exposure to fluids tends to corrode skin putting patient welfare at risk. In patients with more challenging peristomal tracheostomy issues, we have found that traditional interventions are unable to manage this usually intractable problem. We have had remarkable results with a new skin barrier based on medical superglue (cyanoacrylates) in other skin protection applications and this knowledge led us to consider a trial on a convenience sample of eleven patients with skin damage around the tracheostomy insertion site. Such patients are frequently admitted in our Long Term Acute Care (LTAC) facility.

METHODS
Upon admission, with any evidence of skin damage around the puncture wound, we assessed the extent of the skin damage, and then applied the Cyanoacrylate* per the instruction for use on the “at risk” or damaged skin, taking care not to get the material into the airway. The skin protectant was re-applied as needed. Skin health was noted on patient charts and photographic images were captured.

RESULTS AND CONCLUSION
Skin improvement was observed for all 11 patients enrolled in this study. Of these long-term acute care patients was 65 with a range of 36-79 years of age. Initially, the cyanoacrylate was applied three times per week, but with staff comfort and familiarity, we felt that two times per week was a sufficient frequency of application. The days to discontinuing the cyanoacrylate averaged 12.5, with one outlier of 53 days. Considering the other 10 patients, the average to discontinuing the cyanoacrylate was only 8.5 days. The average Braden score for this study group was 14.2, which is considered "Moderate Risk" for pressure ulcer development. Among the comorbidities are diabetes, COPD, nutritional support, CVA, developmental issues, s/p liver transplant, vasopressors and kidney disease and GERD.

DISCUSSION
Of the eleven patients treated with the cyanoacrylate skin barrier to the peri-tracheostomy sites, five were male and six female. The average age of these long-term acute care patients was 65 with a range of 36-79 years of age. Initially, the cyanoacrylate was applied three times per week, but with staff comfort and familiarity, we felt that two times per week was a sufficient frequency of application. The days to discontinuing the cyanoacrylate averaged 12.5, with one outlier of 53 days. Considering the other 10 patients, the average to discontinuing the cyanoacrylate was only 8.5 days. The average Braden score for this study group was 14.2, which is considered "Moderate Risk" for pressure ulcer development. Among the comorbidities are diabetes, COPD, nutritional support, CVA, developmental issues, s/p liver transplant, vasopressors and kidney disease and GERD.

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