

Evaluating the Feasibility of Multi-Modal Educational Interventions to Improve Patient-Caretakers' Health Literacy in Mulago Hospital Neurosurgical Ward, Uganda.

Chinemerem Nwosu¹, Sherry Yang¹, Sandra Batakana¹, Joao Ricardo Vissoci^{1,2}, Michael Muhumuza⁵, Hussein Ssenyonjo⁷, John Mukasa⁵, Jøel Kiryabwire⁵, Anthony Fuller^{1,6,7}, and Michael Haglund^{1,5,6,7}

Duke University Division of Global Neurosurgery and Neurology, Durham, NC, USA; Division of Emergency Medicine, Department of Surgery, Duke University Medical Center, Durham, NC, USA³; ⁴Duke University School of Medicine, Durham, NC, USA; ⁵Department of Neurosurgery, Mulago National Referral Hospital, Kampala, Uganda; ⁶Duke University Global Health Institute, Durham, NC, USA; ⁷Department of Neurosurgery, Duke University Medical Center, Durham, NC, USA



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Introduction

The purpose of this study was to evaluate the feasibility of implementing different educational interventions (SMS reminders, posters, and a healthcare educator) to improve patient-caretakers' health literacy and their patients' health outcomes. Patient-Caretaker education ensures that patients and their families are knowledgeable about the management of healthcare needs, treatment options and effective use of education.¹ Thus, it is important to provide both written and verbal health information²

Methods

Quantitative data:

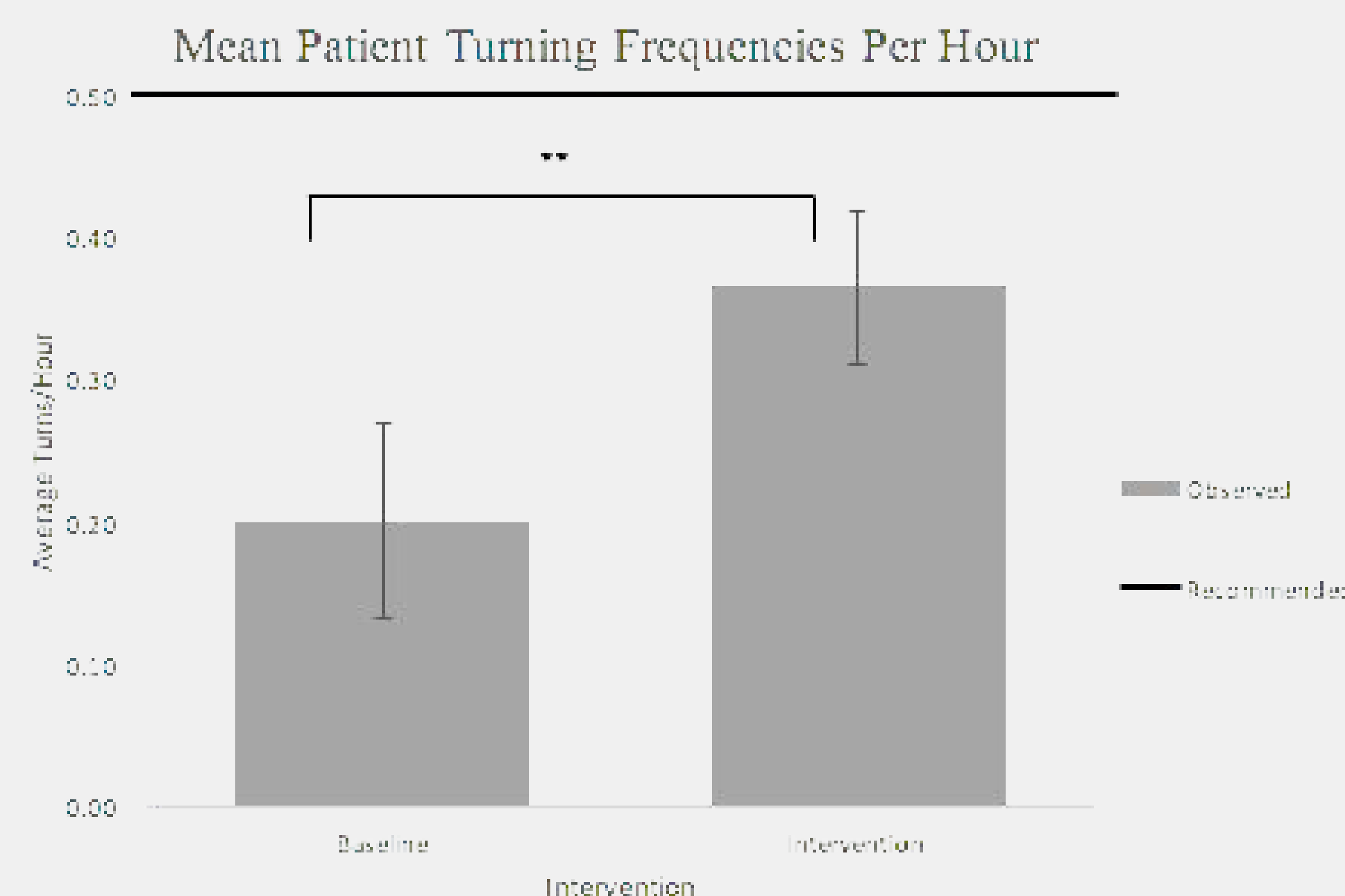
Frequency of patient turning, to avoid bed sores, were recorded at time intervals before and after SMS reminders were sent to 26 caretakers with immobile patients.

Qualitative data:

For each intervention, all participants were interviewed and surveyed to determine acceptability, satisfaction, limitations.

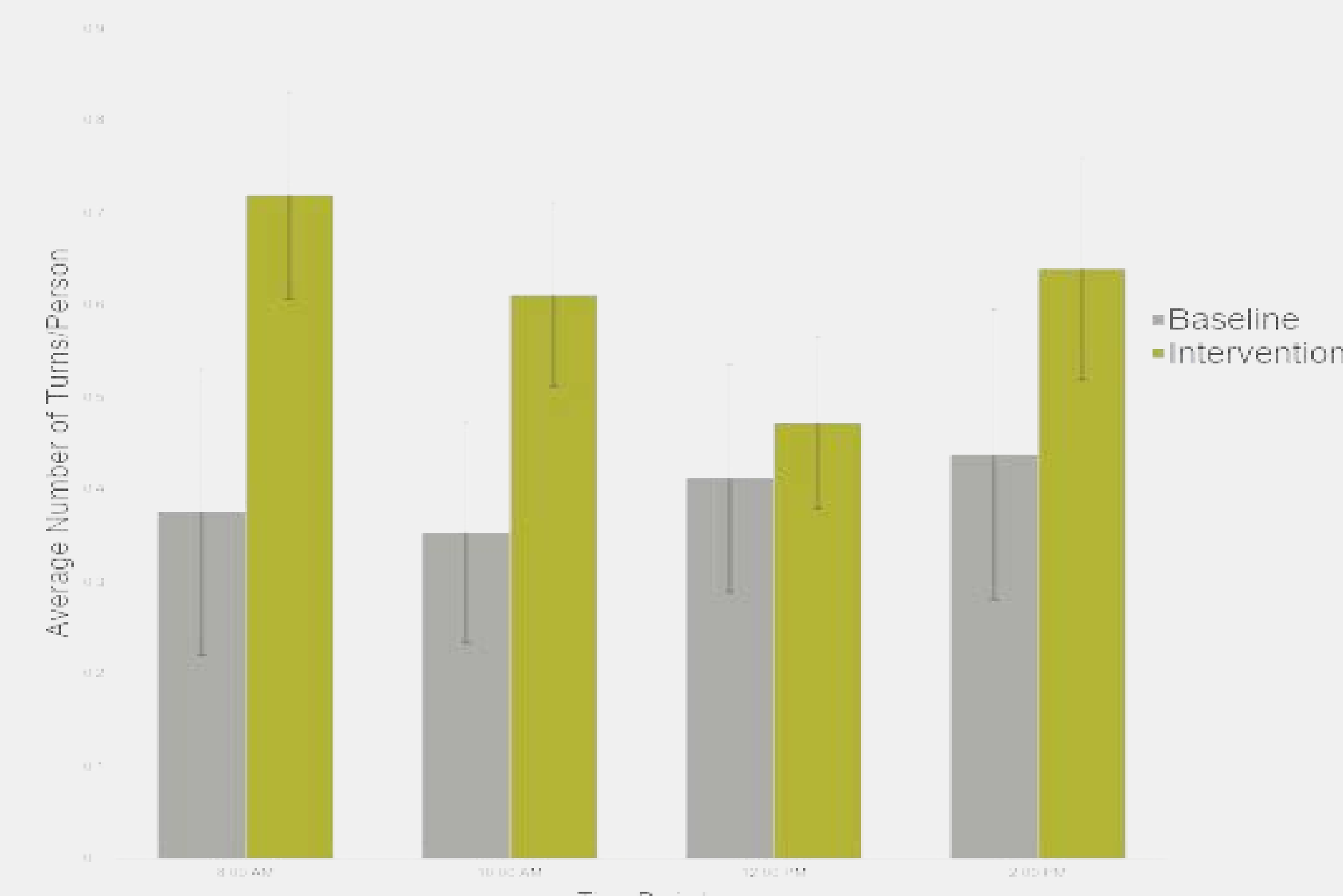
Results

QUANTITATIVE DATA ANALYSIS



“Recommended” line refers to the standard frequency to turn patients every two hours (0.5 turns / 1 hour). T-test revealed that differences were significant between Baseline and Intervention, $p < 0.05$.

Mean Patient Turning Frequencies During the Day



Frequency of turns increased after intervention compared to baseline observations.

QUALITATIVE DATA CONTENT ANALYSIS

POSTER INTERVENTION

Main Themes	Raw Themes	Quotes from Participants
Satisfaction and Comprehension	<ul style="list-style-type: none"> Posters are education assistance tools Posters help reduce work burden of nurses Caretakers with low literacy can understand proper feeding techniques 	<p>“They taught me how to feed an immobile patient” (Caretaker 107)</p> <p>“It saves the staff time to answer questions because one can get that information from reading the posters.” (Caretaker 204)</p>
Barriers to Education	<ul style="list-style-type: none"> Some caretakers are unable to read poster information. 	<p>“It’s hard to explain if they speak another language.” (Staff 104)</p>
Gaps in Education	<ul style="list-style-type: none"> Not all important information about feeding can be represented in a poster. Need for posters in other languages 	<p>“Add more pictures to every poster to make those who don’t know to understand, especially for those who can’t read English/Luganda” (Caretaker 106)</p>
Usage	<ul style="list-style-type: none"> Posters are helpful reminders and guidance during feeding 	<p>“I always consult the poster when am going to feed the patient in order to know what to feed him” (Caretaker 204)</p>

EDUCATOR INTERVENTION

Main Themes	Raw themes	Quotes from Participants
Educator’s Interactions	<ul style="list-style-type: none"> Educator is accessible to caretakers and has a good relationship with them Educator taught caretakers the right way of feeding patients 	<p>“If you feed the patient while lying down, they might aspirate, but if you feed them the way the educator taught me, then it’s good for the patient” (Caretaker 203)</p>
Benefits of Intervention	<ul style="list-style-type: none"> Educator reduced workload of the nurses Educator is a good human resource and support to caretakers 	<p>“The doctors/nurses do not have enough time for us. Some of us do not know how to read the posters but having someone who tells you what is on the posters is very helpful.” (Caretaker 204)</p>
Barriers to Intervention	<ul style="list-style-type: none"> Other factors can still cause aspiration or improper feeding Constant change of caretakers can affect improved patient outcomes 	<p>“(Patients) keep changing attendants, which is why we have a problem with aspiration...a new caretaker came in the middle of the night and incorrectly fed the patient. Even though the primary caretaker had been educated previously, the mistake of the new attendant resulted in aspiration.” (Neurosurgery Resident 321)</p>

SMS INTERVENTION

Main Themes	Raw Themes	Quotes from Participants
Comprehension and Education	<ul style="list-style-type: none"> SMS is easy to comprehend and informative Caretakers understand the importance of the task (patient turning) 	<p>“(SMS reminders) explains to change patients so they won’t get sores on their body...they have taught me. I didn’t know it was important to change patient’s positions.” (Ward Caretaker 9)</p>
Strengths of Intervention	<ul style="list-style-type: none"> SMS reminders allow caretaker to become more efficient at patient turning over time. SMS reminders will be helpful for caretakers who are new in the ward and not aware of tasks 	<p>“(SMS) were easy to understand. (It) takes less and less time to turn (the patient) because I am used to it after each reminder.” (HDU Caretaker 2)</p> <p>“(SMS reminders) will be good for those who are also coming into the hospital (newly)” (Ward/HDU caretaker 1)</p>
Barriers and Limitations	<ul style="list-style-type: none"> Some caretakers did not receive SMS reminders Patient turning can be restricted by the physical conditions of the ward Some caretakers need help/assistance to perform the task 	<p>“Never received (the SMS reminders) because I changed phone numbers” (Ward/HDU Caretaker 1)</p> <p>“Patient is heavy, so it is hard to do w/ only one caretaker” (Ward caretaker 9)</p>

Conclusions

SMS Intervention:

- Patient turning frequency significantly increased by 82% with SMS reminders but is still not up to the recommended rate.
- Intervention was not inclusive for illiterate caretakers or those without a mobile phone.

Poster Intervention:

- More pictorial information is needed for the low literacy population.

Educator Intervention:

- Educator is needed to reduced work burden on nurses and physicians.
- There are cost barriers to employing a full-time educator

Future Directions: Although all interventions are feasible, there is need to determine how to make them cost-effective and sustainable in an LMIC context.

References

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- Johnson, A. (2005). Written and verbal information versus verbal information only for patients being discharged from acute hospital settings to home: systematic review. Health Education Research, 20(4), 423-429. doi:10.1093/her/cyg141

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Contact Information: Chinemerem Nwosu, cn78@duke.edu; Sherry Yang, sy125@duke.edu