Secure Messaging to Improve Nurse-Provider Communication in Long Term Care

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Problem

15,000 long-term care (LTC) facilities (Medicare.gov, 2013)

1.5 million people residing in LTC facilities in 2004 (CDC, 2015)

Complex care and growing population (Eliopoulos, 2012)

Provider roles
– Attending Physician
– Nurse practitioner (NP)
– Physician assistant (PA)
– Clinical nurse specialist (CNS)

Traditional Practice Model

Telephone communication
– Care delays
– Dissatisfaction Physicians / Nurses (Whitson, 2008)
– Safety (IOM, 1999)
– Communication barriers (Tjia et al. 2008)
– Physician liability (California Healthcare Foundation, 2008)
– Inefficiency (Agarwal, Sands, & Schnieder, 2010)

Clinical Initiative

Demographics

Facility A
– 66 beds
– Metropolitan area
– Majority short term residents
– On-site providers

Facility B
– 73 beds
– Rural area
– Majority long term residents
– Off-site providers

Participants
– Long term care facility nurses (n=25)
– Physician (n=1)
– NP (n=4)

Interventions

Pre-implementation data collection
– Retrospective chart review of nurse notification to provider and provider response times
– Questionnaires with facility nurses using the *Nurse-Provider Communication Needs Assessment Questionnaire* (Tjia et al. 2008)

Secure messaging system implemented with 25 nurses and 5 providers for 2 months
– Cloud based storage of encrypted information
– Application available through smartphone, desk top computer or other mobile device

Pre-implementation data collection
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Outcomes

Questionnaires Results

Pre-implementation questionnaires
– Facility A 16 administered (15) returned
– Facility B 9 administered (8) returned

Post-implementation questionnaires
– Facility A 14 administered (14) returned
– Facility B 7 administered (6) returned

Matched pairs n=6

Paired t test: No statistical significance

Qualitative Data

Nurses describing the most recent difficulty communicating with a provider
– impatience
– provider unfamiliarity with the patient
– interruptions

Nurses description of the most difficult part of communication
– perceived disinterest of provider
– interruptions
– difficulty hearing.

Issues preventing effective communication
– not enough time
– not listening
– not responding timely

Factors cited by nurses to improve nurse-provider communication
– being prepared
– having information readily available

What do you wish providers would do differently when communicating with you?
– allow you to finish
– listen to what I have to say

What do you wish you could do differently when communicating with providers?
– more time
– ability to send lab reports
– to be more involved in care and healthcare decisions

Communication Events Results

Pre-implementation communication events N=312

Response Times
– Elapsed time of communication events n=11 (mean = 57.09 minutes)

Post-implementation communication events N=304
– Facility A n=105 (34.5%)
– Facility B n=199 (65.5%)

Response times
– Elapsed time of communication events n=10 (mean = 94.40 minutes)

Secure Messaging communication events N=55

Response Times
– Elapsed time of communication events n=49 (mean = 36.31 minutes)
– Outlier removed (mean = 8.9 minutes)
– Mode = 1 minute
– 92 % responses < 30 minutes

Conclusions

Implications for practice
– While secure messaging did not improve the questionnaire results, the information available from nurse responses can be used to develop strategies to improve communication.
– Secure messaging has potential to improve provider response time in certain settings.
– There was increased documentation of provider response with secure messaging.
– There was documentation of the content of messages.
– Secure messaging is an alternative to telephone communication and complies with privacy regulations.

Recommendations

Continued work is needed to improve nurse-provider communication and remove barriers to effective communication.

Further study of the use of secure messaging on quality of communication is needed.

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Acknowledgments

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