

# Streamlining Interdisciplinary Communication Using Smartphone Technology

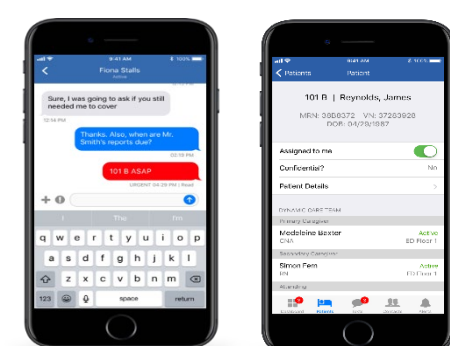
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## Background

- The efficient transfer of information between healthcare providers is vital in all aspects of patient care, and the method of exchange is important.
- Interdisciplinary collaboration and communication can be challenging due to the individual teams that often work in silos. This results in infrequent face-to-face communication and increased use and reliance on electronic tools.
- Providers at New York Presbyterian - The Allen Hospital (NYP Allen) utilize multiple devices in order to stay connected:
  - Telephone,
  - One way pager,
  - Care Widget - one way messaging technology embedded in the electronic medical record, and
  - Mobile Heart Beat (MHB) - two way secure texting and voice smartphone platform, whereby users can view patient information and the multidisciplinary care team members assigned to them.

## Purpose

- In this study, we aim to identify and streamline the preferred method of communication among Registered Nurses (RNs) and clinicians (MDs, medical residents and physician assistants).



## Methods

- The pilot study was conducted over a one month period at NYP- Allen hospital, in the spring of 2018. This study included two medical surgical units - 2 Field West and 2 Field East.
- The study questionnaire was developed by a workgroup of RNs and clinicians.
- A convenience sample of RNs and clinicians completed an anonymous questionnaire which assessed communication style, preference and perception.

## Sample Characteristics

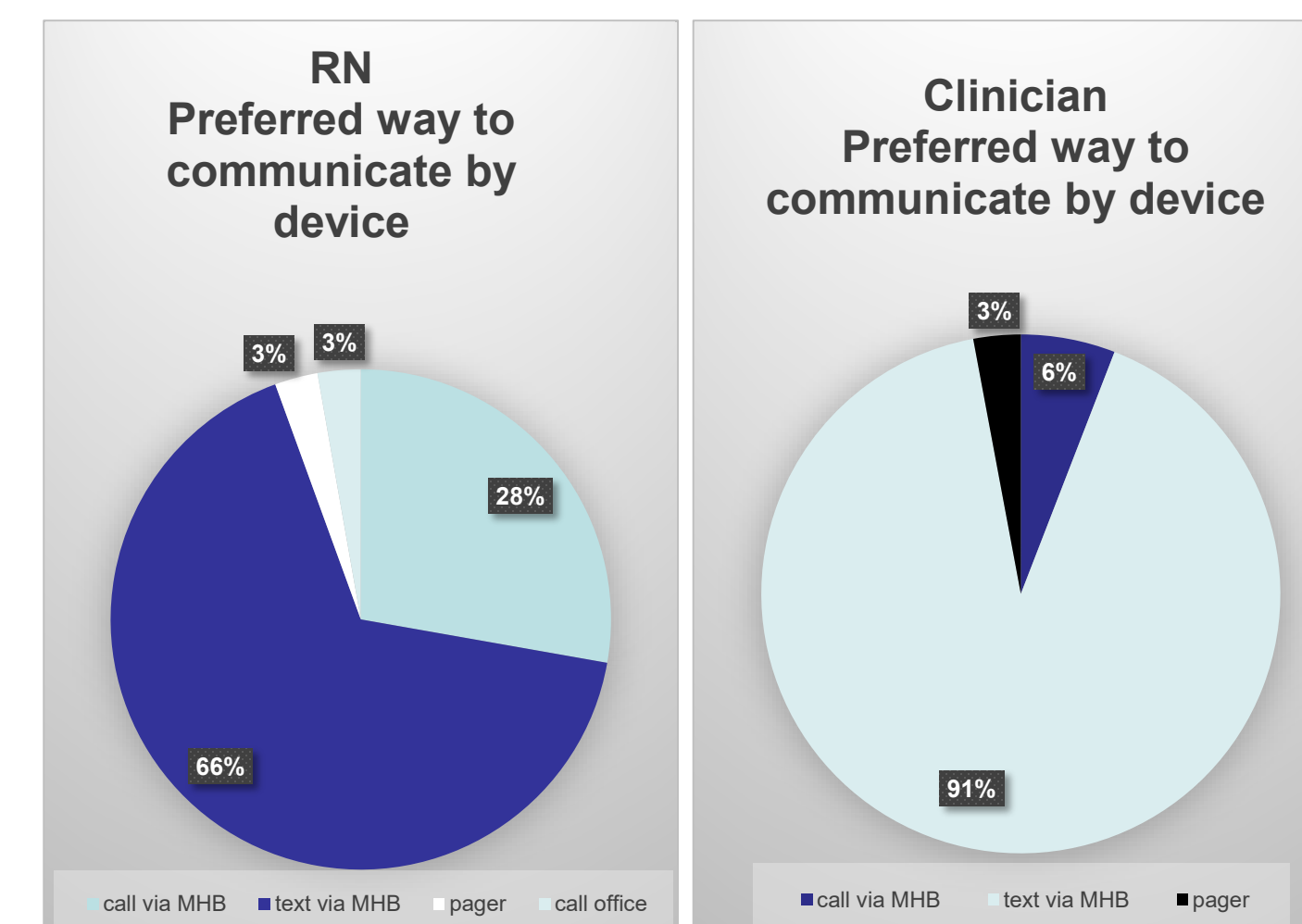
- n= 70 (36 RNs and 34 clinicians)
- The majority, 48%, of RNs were 25 - 34 years of age, only 11% were males and over 60% worked at NYP Allen 10 or more years.
- Similarly, 47% of clinicians were aged 25 - 34 years, 68% were females, and over 77% have worked at NYP Allen less than 10 years.

## Results

- The majority of survey respondents preferred to communicate via MHB - 94% of RNs and 97% of clinicians.
- Texting via MHB was most preferred (66% RNs vs 91% clinicians).

## Results (cont.)

- The preferred method of communicating did not significantly differ from the actual way in which it is currently done (data not shown).
- Both RNs and clinicians agreed that a phone call to the MD is warranted if there is no response from the MD after three or more text messages have been sent and 15 minutes has elapsed.



## Discussion

Communicating via MHB, particularly texting, is favored by both groups, which correlates with recent research. Przybylo et al. found text messaging was perceived to be more efficient than paging and Wu et al. found two way messaging among providers not only improved communication, but also increased efficiency, accountability, timeliness and collaboration. The dual features of MHB makes it a valuable communication tool with great potential.

## Recommendations

Although both groups prefer to use MHB, a few issues should be addressed and improved. Recommendations are...

- A formal protocol and hospital wide in-service is needed to standardize this method of communication preferred by the medical team.
- As per recommendations from RNs, clinicians should consistently sign in at the start of shift - especially on weekends - and should acknowledge text messages in a timely manner.
- As per recommendations from clinicians, RNs should use texting as the first source of communication, rather than call the office or MHB number. However, if significant time has elapsed since a message was sent, a call should be placed to clinician's office.
- A workgroup should be created to work with IT in order to resolve the aforementioned issues, some of which can be attributed to poor wireless connection.
- Delineating the urgency of text messages should be explored.

### References

- Przybylo JA, Wang A, Loftus P, Evans KH, Chu I, Shieh L, Secure Texting Improves Hospital Communication. *J. Hosp. Med* 2014; 9:573-578.
- Wu R, Lo V, Morra D, Appel E, Arany T, Curiale B, Ryan J, Quan S, A Smartphone-enabled communication system to improve hospital communication: Usage and perceptions of medical trainees and nurses on general internal medicine wards. *Journal of Hospital Medicine* 2015;10:83-89.

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