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## Optimizing Secure Patient Messaging Workflow in a Vermont Primary Care Clinic

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# Optimizing Secure Patient Messaging Workflow

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## Background

Secure patient messaging is an asynchronous communication tool designed for non-urgent questions. While increasingly popular with patients, it is sometimes used inappropriately for advice on urgent concerns such as chest pain, falls, and suicidality. Clinical staff may not respond in a timely manner to these concerns given current workflows that prioritize other methods of communication such as phone calls to the office.

## Purpose

Develop a methodology to improve the timeliness, effectiveness, and safety of secure patient messaging workflow within one primary care office in suburban Vermont.

## Methods

**Pre-Implementation:**

- Clinical staff surveyed at baseline utilizing the Likert scale to assess current attitudes toward messaging workflow
- Baseline incoming message types and quantities cataloged

**Implementation:**

- Piloted an RN redeployment model to focus on secure messaging
- Developed patient education materials
- Weekly audits of message types
- Daily audits of message quantities and RN stress levels

**Post implementation:**

- Follow-up staff survey to assess effectiveness of trialed changes

*"RNs succeeded in establishing a routine where MyChart messages were centralized for 2-4 hours per day. This is a huge accomplishment given all the human/change management factors involved."* – project participant



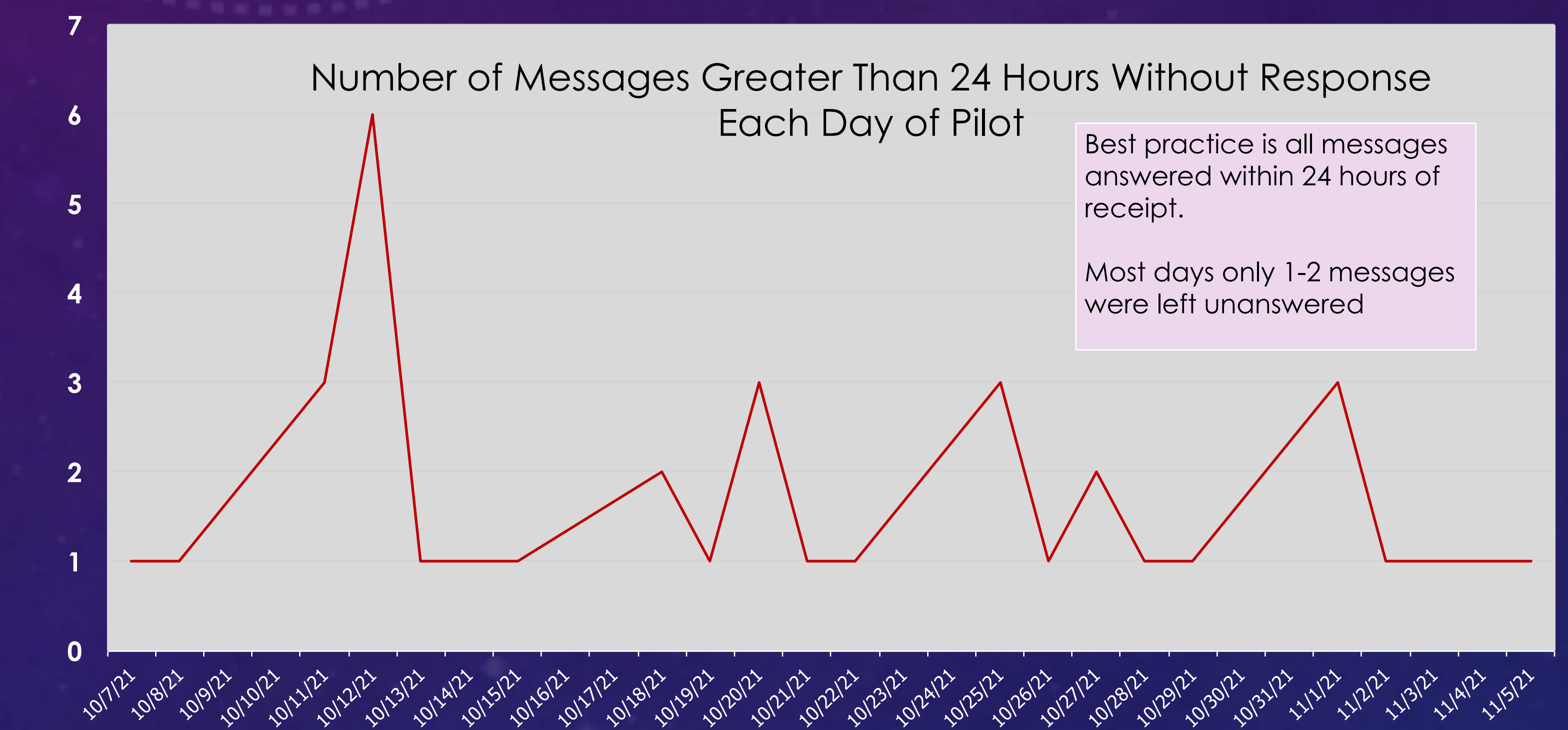
Figure 1: Clinic staff attitudes concerning timeliness, efficacy and safety of secure messaging workflow all significantly improved during the pilot. Pre-implementation survey  $n = 17$ ; post implementation survey  $n = 15$

## Results

- Post-implementation survey findings showed a clear improvement in staff attitudes regarding efficiency, timeliness and safety of secure messaging process during the pilot
- Audits of messages showed marked improvement in timely responses and fewer urgent messages incoming to the office overall
- Patient communication with tips for appropriate messaging had open rate of 38% ( $n = 1274$ ) and positive response from readers

*"It was much better to see the messages during the work day than have them forwarded overnight and knowing the patient had already waited all day for an answer they hadn't gotten."* – project participant

*"Offices not realigning their task priorities to align with the rapid change in patient behavior (i.e. patients use portals more, while...offices continue to rely on older forms of communication) creates a vortex where more portal messages AND telephone encounters occurs as offices struggle to keep up due to being 'behind the times.'" – project participant*



## Limitations

- Concurrent initiative to reduce overall in-basket volumes made it difficult to discern how much reduction in secure messages attributable specifically to pilot
- RN stress levels are subjective and not necessarily correlated with secure messaging vs. other stressors, such as pandemic
- Message auditing/categorization an exercise in clinical judgement

## Conclusions and Practice Implications

Data clearly shows that patients like and use secure messaging, often preferring it to calling their clinic. However, clinic workflows have traditionally prioritized responding to incoming phone calls, despite the fact that secure messages are becoming more involved, more urgent, and more frequent. This project demonstrated that committing to a change in office workflow can result in more timely, efficient, and safe patient care. It did so without any financial investment and via a model that can be easily adopted by other primary care or specialty care ambulatory clinics.

### References

- Green, R. (2012). Meaningful use of secure messaging for providers, patients. *DAR Intelligence: Xceligent Healthcare Media*. Retrieved from <https://www.xceligent.com/news/meaningful-use-of-secure-messaging-for-providers-patients>
- Huan, J., Holtzway, W., Chavez, M., Anstori, N., Vetter, B., Miller, B., Martin, T., Kendrick, L., Naji, K., Mello, C. (2017). Clinical practice informs secure messaging benefits and best practices. *Applied Clinical Informatics*, 2(4), 100-101.
- Hoonakker, P., Carey, P., Carstiff, B. (2017). The impact of secure messaging on workflow in primary care: Results of a multiple-case, multiple-method study. *International Journal of Medical Informatics*, 100, 83-78. <https://doi.org/10.1016/j.ijm.2017.01.005>
- Latham, H. J., Layman, L. K., & Pugh, J. A. (2018). Examining the complexity of patient-supplier care team secure message communication: Qualitative analysis. *Journal of Medical Internet Research*, 20(7), 151-161. <https://doi.org/10.2196/100202>
- North, J., Lutzman, K., Melmann, E., Melmann, T., Tulejski-Schotel, S., North, E., & Picone, J. (2020). A retrospective analysis of provider-to-patient secure messages: How much are they increasing, who is doing the work, and is the work happening after hours? *JGIM Medical Informatics*, 6(7). <https://doi.org/10.1002/jim2.10014>
- Shemata, S., Petrasis, B., Rothwender, J., Zekic, M., Siboi, Zhao, Hua Feng, Fiv, D., Dakrynak, M., Martin, T., Johnson, S., Tull, B., Gordon, H., Simon, S., Woods, B., Zhao, S., & Feng, H. (2017). An analysis of patient-provider secure messaging in two Veterans Health Administration medical centers: Message content and resolution through secure messaging. *Journal of the American Medical Informatics Association*, 24(3), 345-349. <https://doi.org/10.1093/amia/abt014>
- Yasushi, J., Winkler, M., Yau, N., Burgo, L., & Sakorazaki, E. (2020). Utilization of Secure Messaging to Primary Care Departments. *The Permanente Journal*, 24, 19-177. <https://doi.org/10.7554/2019.24.4>



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