

Secure Clinical Texting: Patient Risk in High-Acuity Care

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by George A. Gellert, MD, MPH, MPA; George S. Conklin; and Lynn A. Gibson

Abstract

The Joint Commission recently reversed its prior authorization of the use of secure clinical texting to issue patient care orders, now again prohibiting texting of orders. However, the potential sole or exclusive use of clinical texts to transmit other patient care information beyond care orders still poses a risk to patient safety in high acuity care because of text transmission delays resulting from carrier-dependent latency. Although texting in routine patient care may deliver high value to clinicians, the risk of latency and delayed receipt of clinically urgent or time-sensitive texted patient information in high-acuity care settings can harm patients. We completed a review of 19 secure clinical text vendor websites, finding that 16 of 19 (84 percent) market their products for use specifically in high-acuity and critical patient care. The secure clinical texting industry needs the policy guidance of The Joint Commission and health information technology professionals to minimize risk to patients, clinicians, and hospital systems as secure clinical texting becomes standard accepted practice.

Introduction

The Joint Commission, which accredits 4,032 US hospitals, recently reversed its prohibition on texting of patient care orders if a secure encrypted clinical texting platform is utilized.^{1,2} Subsequently, The Joint Commission determined that secure texting of clinical orders will continue to be prohibited because of concerns about creating a transcription burden for nurses, and possible care delivery delays due to the asynchronous nature of text communication and physician review/validation of clinical decision support alerts.³ However, questions remain regarding the use of secure texts in clinical settings where patient urgency and acuity are high, and delays in receipt of texts can be problematic.

Secure clinical texting products should eliminate transmission of personal health information via unencrypted consumer SMS (short message service) on smartphones. However, like SMS texting, secure clinical texting can be affected by text receipt delays (or latency) when telephone carriers have high network activity. Latency can cause potential delays in transmission of patient care information, including information critical to physician clinical decision-making. Latency can also affect text receipt and read confirmations sent from the recipient's smartphone or tablet back to the sender's device. Because receipt and read confirmations are also at risk of transmission delay due to latency, their intended use as a means of assurance that critical clinical information has been conveyed to the recipient can be uncertain at times of high carrier network activity. Wi-Fi networks within hospitals can experience related issues, such as transient wireless connectivity drops, which can result in similar reliability issues for text transmission and receipt. In addition, the duration of text delay or latency is determined by constantly changing variables related not only to the volume of traffic that a telecommunications carrier supports at any given moment, but also to the technological signal transmission infrastructure in any particular geographic location. Although secure texts have significant value for routine care communication, physicians should pause to consider exclusive use of text for communication of urgent care information where receipt delays due to text latency can occur. Displacement of voice contact and exclusive reliance on texting could inadvertently cause patient harm when a transmission delay occurs.

In addition to concerns about delayed critical care communications due to carrier latency, another issue requiring guidance is whether texted clinical care content needs to be made part of the patient's formal medicolegal record. A number of issues arise in this context, including how texted content will be uploaded to the electronic health record (EHR), by whom and with what frequency. Not all secure clinical text vendors offer such integration. Clearly, if new and critical patient care information is first communicated through secure clinical texting, it will need to be captured within the patient's medical record/EHR. Beyond messaging of written text, clinicians often utilize texting to share photos of patient conditions with visible features, such as wounds or skin lesions, or patient data such as EKGs. Photographic content presents further challenges for integration into the medical record and the EHR. Thus, beyond patient safety concerns related to clinical texting, or technical considerations

for information and health informatics personnel, leaders of health information management and health informatics departments need to be integral to the process of planning, implementing, and ensuring the appropriate ongoing function of secure clinical texting applications.

Our hope is that The Joint Commission's ongoing guidance on secure clinical texting will give due consideration to the existing technological limitations of cellular networks, and the impact of these limitations (such as text latency) on acute clinical care delivery and patient safety. A telephone call ensuring the receipt of urgent patient information can often be completed as rapidly as a text. Because of the latency factor, texting is suited primarily for communication about routine, non-urgent care issues, whereas telephone or face-to-face communication should be used when urgent and critical patient care actions are required. In high-acuity patient care, texts should only supplement—never supplant—telephone contact, or be the sole vehicle of communication.

Secure Clinical Texting Industry: In Need of Marketing Guidance

Reviewing 19 websites of secure clinical text vendors, however, we found that 16 vendors, or 84 percent, stated that their product can be used to transmit critical lab results, critical patient monitoring alerts, and cardiac arrest codes (see [Figure 1](#) for illustrative actual e-mail advertisement). We completed an exhaustive web search of all vendors of secure clinical texting applications that we could find over a two-week period, utilizing diverse search terms related to this functionality. Almost all were health information technology companies offering multiple clinical information technology products, of which secure clinical texting was one. Most vendors offered a degree of integration of their secure clinical texting product with other products offered. We believe that these vendors represent the large majority of the marketplace for implemented or available secure clinical texting applications.

Figure 1: Image from a Vendor E-mail Solicitation for a Secure Clinical Texting Product



Given these findings, it is clear that the secure clinical texting industry needs to ensure that its marketing does not result inadvertently in its customers perceiving that clinical texting can serve appropriately as the only or exclusive channel of critical patient care communications in high-acuity care settings, without telephonic or other validation of the receipt of clinical care information having high urgency and warranting rapid implementation of a care change.

In high-paced, stressful clinical settings, texting could—intentionally or unintentionally—displace telephone contact for non-code but still critical patient care communications. Although clinical judgment and diligence may generally prevent indiscriminate and exclusive text use in high-acuity settings, when patient and work volume increase, errors can occur and reliance on texting may become total. Clinicians should remain vigilant to identify situations in which communication requires telephone contact to confirm receipt of critical information and thereby ensure the safest care, particularly when acuity is high and when time-sensitive care information requiring immediate action by recipients is texted.

Evolving Best Clinical Texting Practices

Most secure clinical texting applications enable telephone callback from recipients to the text sender with a single tap, and this practice should be engaged by clinicians utilizing texting, as needed, to ensure safe and effective clinical communication and conferral. In high-acuity care settings, in which text delays due to latency could engender a risk of patient harm, clinicians should err on the side of safety and rely on telephonic or face-to-face communication, or mixed text and telephonic communication, to validate that all critical, time-sensitive information is received so it can be acted on. The secure clinical texting industry should review its sales strategies and marketing content to ensure that it is not inadvertently influencing its customers to rely exclusively on text communications in high acuity care settings or scenarios where patient harm could result from delays in text receipt.

The views expressed here are those of the authors, and do not represent the views of CHRISTUS Health, which is currently formulating secure clinical texting policies.

George A. Gellert, MD, MPH, MPA, is the Associate System Chief Medical Information Officer in the Department of Health Informatics at CHRISTUS Health in Dallas, TX.

George S. Conklin is the Chief Information Officer in the Department of Information Management at CHRISTUS Health in Dallas, TX.

Lynn A. Gibson is the Chief Technology Officer in the Department of Information Management at CHRISTUS Health in Dallas, TX.

Notes

[1] The Joint Commission. "[Texting Orders: Is It Acceptable for Physicians and Licensed Independent Practitioners \(and Other Practitioners Allowed to Write Orders\) to Text Orders for Patients to the Hospital or Other Healthcare Settings?](#)" (accessed January 23, 2016).

[2] The Joint Commission. "[Update: Texting Orders](#)." *Joint Commission Perspectives* 36, no. 5 (May 2016): 15. (accessed October 15, 2016).

[3] The Joint Commission. Clarification: "[Use of Secure Text Messaging for Patient Care Orders Is Not Acceptable](#)." *Joint Commission Perspectives*, December 2016. (accessed January 3, 2017).

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