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Care Communication Gaps
in U.S. Hospital Emergency Departments

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Overview

The "Care Communication Gaps in U.S. Hospital Emergency Departments" research was conducted in December 2016. The goal of this research was to understand the common communication challenges which exist in U.S. Emergency Departments (ED) today and the impact of those changes on patient care and care team performance. The survey also sought to understand the processes and technologies ED care teams have used to improve those communication challenges and the effectiveness of those improvement initiatives.

A total of 158 emergency department leaders replied to the survey. These included primarily Directors of the Emergency Department and Directors of Clinical Quality (a complete breakdown can be seen below).
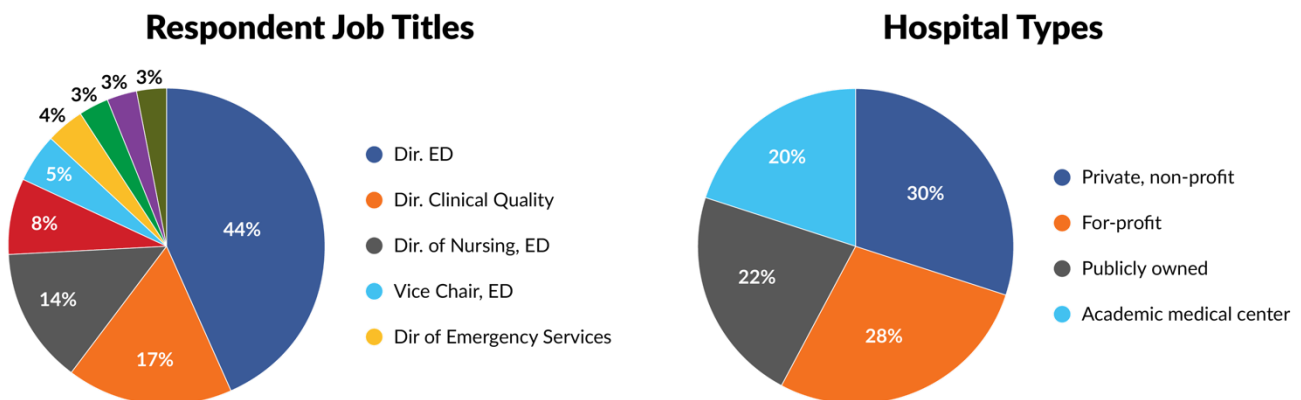
Emergency Departments that participated in the survey included academic medical centers, private, nonprofit hospitals, publicly owned hospitals and for profit systems in short term stay acute care hospitals with at least 200 beds.

Primary Insights

- Emergency Departments are complex communication areas – 59% report more hand offs than the rest of the hospital.
- Communication errors are relatively common – More than half of Emergency Departments report more than 10% of hand offs have a communication error.
- Real-time communications are the most effective – face-to-face, secure messaging and mobile phones are reported as the most effective forms of care team communications (79-82%).

- Many hand offs are complex, requiring multiple communication methods – between 3.3 and 4.9 channels are used at each hand off point.
- Front-end processes are the most inaccurate communication points – intake and triage report the least accurate communications.
- Communications across remote individuals raise the most communication challenges, including waiting for physician responses (23 – 32%) and incomplete or delayed information (19-21%).
- New workflows have an impact, but don't solve the entire problem – 34% of hospitals using Fast Track for low-acuity patients still report ED wait times to first see a doctor at over 30 minutes.
- Emerging remote team technologies and workflows show promise for impacting care team collaboration – over 80% report tele-consult and tele-stroke are the most effective workflows, with secure messaging being listed as the 2nd most effective communication technology (just after face-to-face).

**ED Coordination is More Complex Than the Rest of the Hospital**

Care Coordination Complexity
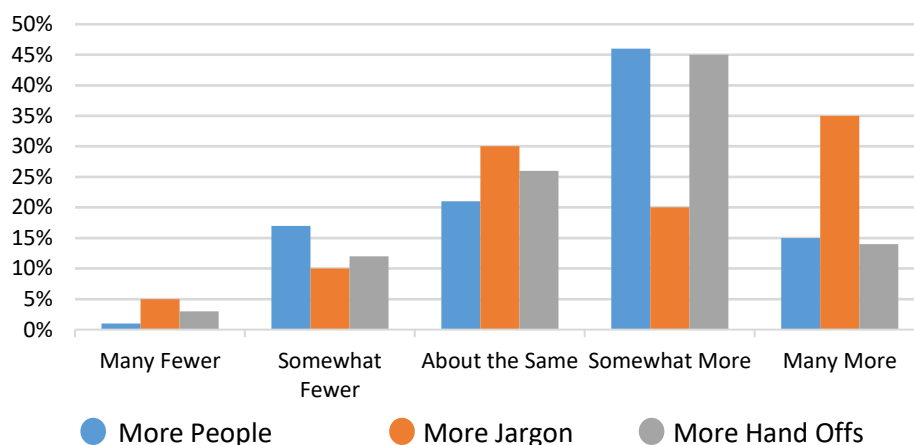
Emergency Departments have more communication complexity than the rest of the hospital. 61% of departments report that they have more staff involved in a patient's care than throughout the rest of the hospital. This aligns with the complexity of care in an Emergency Department. For example, in order to manage a stroke patient, an average care team might involve 12-15 doctors/nurses and staff members spread out across the hospital. ED care team members (59%) also reported an increased need for a doctor/nurse/practitioner updating another doctor/nurse/practitioner in the facility about a current patient's care or recommended care (hand offs) and the use of more specialized terminology (55%) in order to treat patients.

Communication Errors Happen During Hand Offs

Handoff with Errors

4%

18%

49%

29%

● Up to 10%

● 11% - 20%

● 21% - 30%

● 31% - 45%
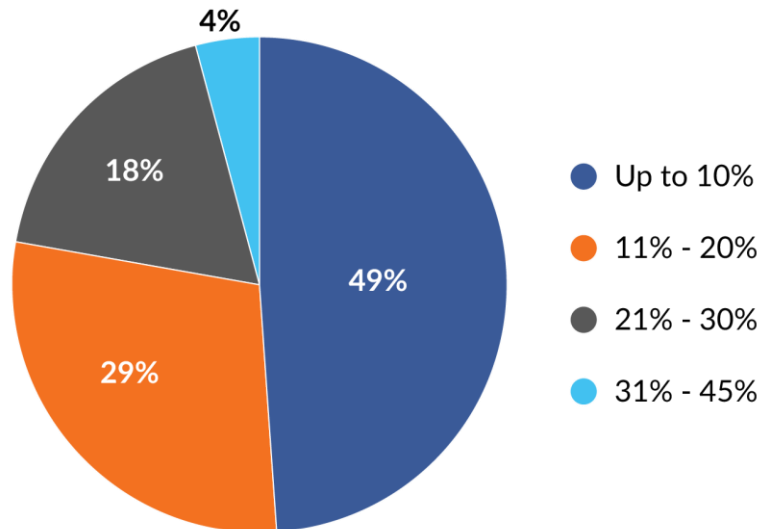
Over half of respondents reported that communication errors occur in more than 10% of Emergency Department hand offs. The Joint Commission has previously reported that 37% of unexpected events causing injury or death in the hospital (sentinel events) are due to communication and assessment errors, highlighting the impact of communication on patient care. With the large number of hand offs and communication methods used in Emergency Departments, it is easy to see how inefficiencies could affect patient care.

Communication Complexity and Challenges During Care Team Hand Offs

Emergency Departments use a myriad of communication technologies for each hand off, as care team members need to discuss each patient case in real-time, notify team members when they are needed to take action and document information for follow-up.

No. of Communications Methods Used

Legend:
- 2-4
- 5-9
- 10-14
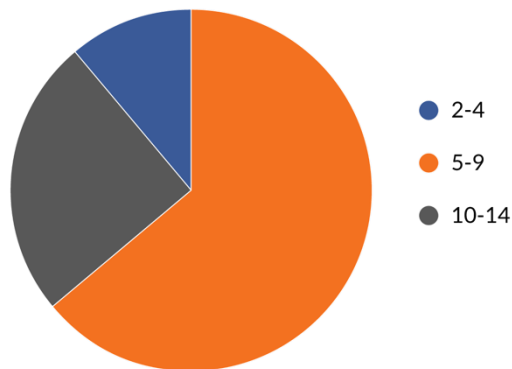
Highest No. Used

## 4.9

during treatment discussions

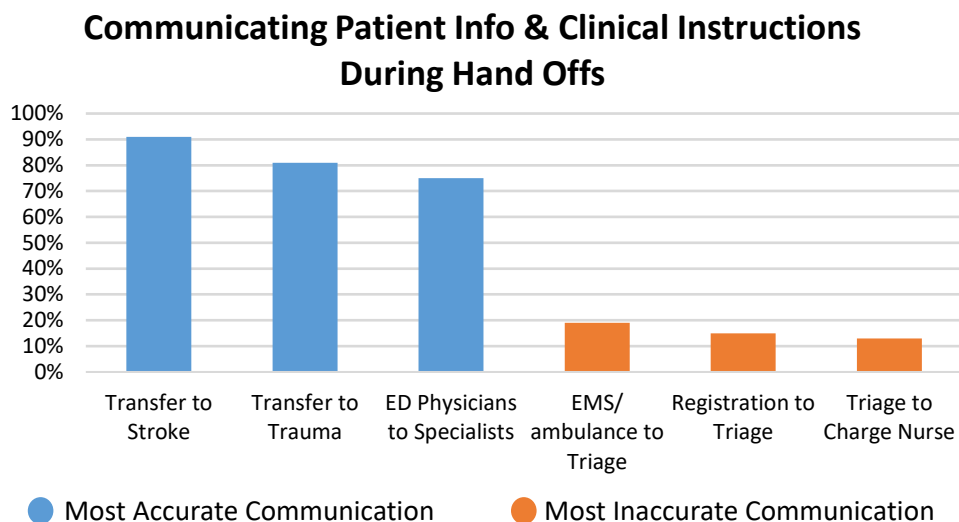**Lowest No. Used**

3.3

when discharging a patient

Along with the complexity of communication and methods used at each hand off, a number of common challenges were highlighted which impact the effectiveness of those communications. Those challenges included waiting for physicians and specialists to respond to requests, such as the need for a consult, following up with patients and orders. The communication tools commonly used to notify physicians of requests (e.g. pagers, voicemail, faxes and answering services) were rated among the least effective communication methods by respondents.

Poor handwriting and incomplete information were also highlighted as common communication challenges. Typically, this results in the need to follow up with other care team members for clarification

Top Communication Challenges

X-axis labels: Response from Specialist, Poor Handwriting, Response from Phys., Incomplete Info, Delays Receiving Info
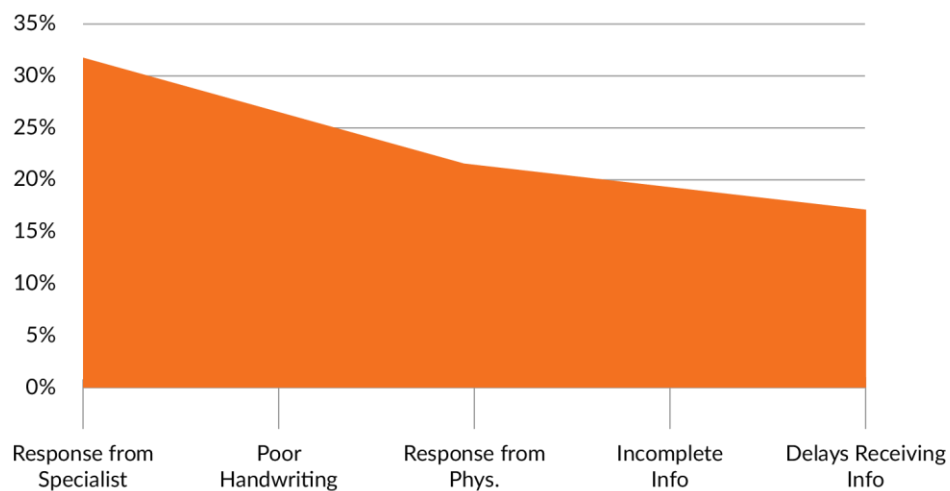
and/or more information in order to be able to assess or treat patients. Delays in receiving information such as lab and test results also were indicated as common challenges.

Communicating Patient Info & Clinical Instructions During Hand Offs

Legend:
● Most Accurate Communication ● Most Inaccurate Communication

In addition to top communication challenges, respondents reported some issues with accuracy of passing patient information and clinical instructions during specific hand off points in a patient's care in the Emergency Department. The least accurate communications were reported between in-bound ambulance crews, triage nurses and charge nurse as care teams are managing the arrival of patients; these hand offs require having the most accuracy – and staff face challenges in gathering information about the patient. These hand offs were also reported as some of the quickest hand offs, which aligns with the speed needed to handle inbound patients.

The most accurate hand offs reported were transfers to trauma or stroke centers where many hospitals have dedicated individuals assigned to handle these communications. These were also reported as the quickest hand offs. The majority of these hand offs are being managed via landline(s) for transfers or face-to-face communication. For managing arriving patients, this often means that information is not communicated until the patient arrives versus pre-hospital arrival.

Communication Methods and Workflows Have Had Mixed Results

In order to support real-time discussion of a patient's case, the survey found a number of technologies/methods are being used, with respondents reporting various levels of effectiveness:

Real-Time Communications
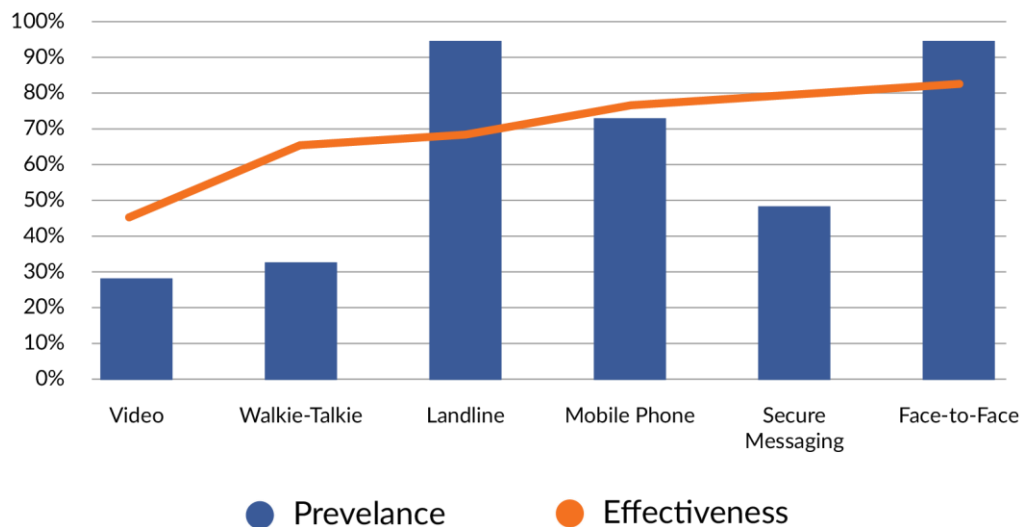
Face-to-face discussion and the use of landlines are the most used forms of communication across Emergency Departments (over 90%). It was noted, however, that landlines reported a lower level of effectiveness than face-to-face discussions (69% vs. 82%). This may be due to the fact that landlines require that care team members be at a fixed location – and they are frequently mobile within the department, making it difficult to reach individuals.

The survey also noted the rising use of mobile phones within the Emergency Department (79%), which respondents believed were nearly as effective as face-to-face discussions (79%). While not as prevalent in Emergency Departments, with just under 50% indicating the use of secure messaging, many reported that this newer technology was more effective than just mobile phones (80%). These newer solutions are often mobile. Respondents reported walkie-talkies/radios are nearly as effective as landlines, but the survey saw the use of these limited (32%). Often this technology is limited to communication with in-bound ambulances or onsite security personnel.

Another emerging area of real-time communication is the use of video. Only 28% of respondents replied that video was being used. Respondents were mixed on the effectiveness of video (close to 50% either way). This is contrary to later questions about the effectiveness of tele-medicine programs (which

involve video) in improving communications. While the study did not explore the reason for this discrepancy, the mixed response may be due to the mix of early generation tele-medicine technologies and the emergence of newer smart phone/tablet-based solutions.

Respondents were also asked about the negative impacts of using specific communication technologies on the team (e.g. impact on efficiency or costs). Real-time communication methods received the lowest reports of negative impact, with nearly half of respondents reporting no negative impact and the remainder indicating scattered impact on provider and satisfaction for some of the newer technologies (21-25%), likely indicating adoption challenges. Respondents reporting on face-to-face and landline did indicate an impact on staff time (17%) and efficiency (21%).

## Non Real-Time Communications
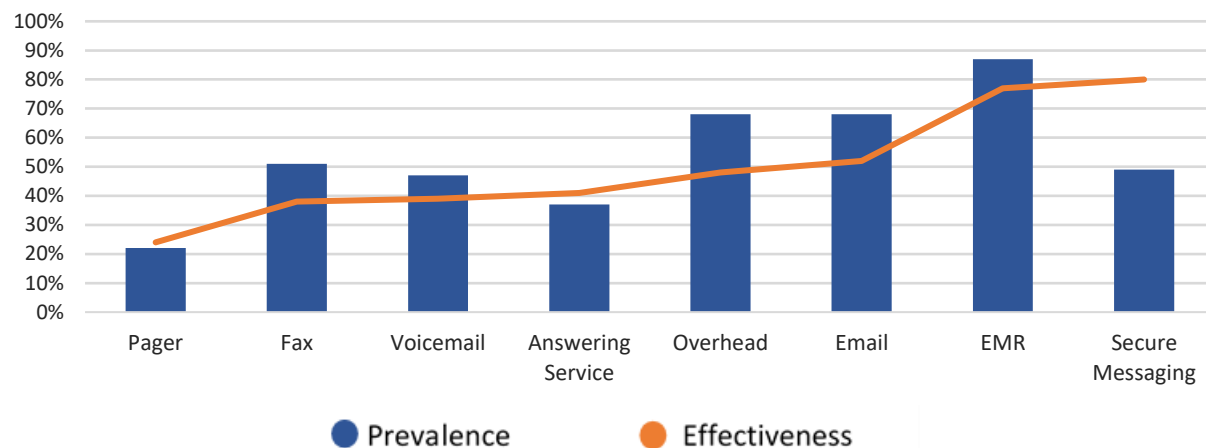
Non real-time (or delayed) communications are used throughout the Emergency Department to notify team members of the need to respond to a request from someone else on the team, a patient, or new emergency. A number of these communications are also used to "leave a message" for a clinician for follow-up later. Most of these methods were rated much less-effective than real-time communication methods. Unlike real-time communications, several of these methods were reported with negative effects for more than 25% of respondents.

In particular, respondents reported that voicemail, answering services and pagers negatively impacted patient satisfaction. These communication methods are often used for contacting physicians to request patient callbacks, complete orders, or consult with other physicians and clinical staff on patients. 32% of respondents reported that getting a response from a physician is a communication challenge. Overhead paging was also reported to have an impact on patient satisfaction. A number of studies have shown the negative impact of noise levels in the hospital due to overhead paging systems, which impact patient satisfaction during their stay.
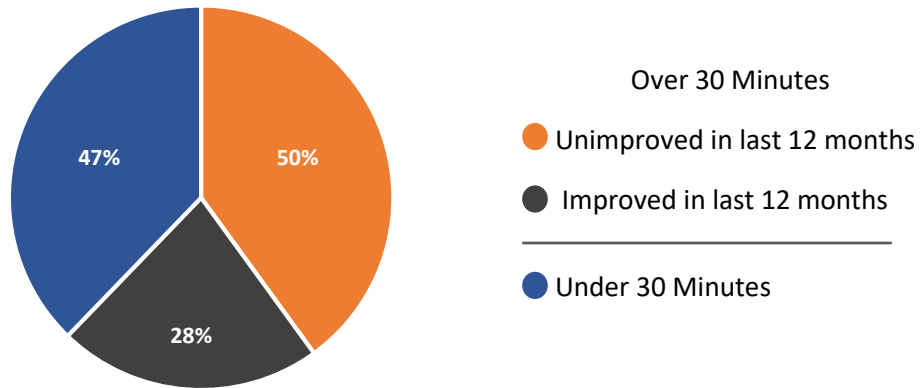
Those reporting on the effectiveness of the EMR in communication (which is typically used throughout the patient stay to document/communicate about the patient) found it slightly less effective than secure messaging (88% vs. 77%). They also indicated that EMR usage has negative impact on the care team including costs (staffing, resources, and other expenses) (49%), physician satisfaction (39%) and staff time (35%).

Impact of ED Workflows
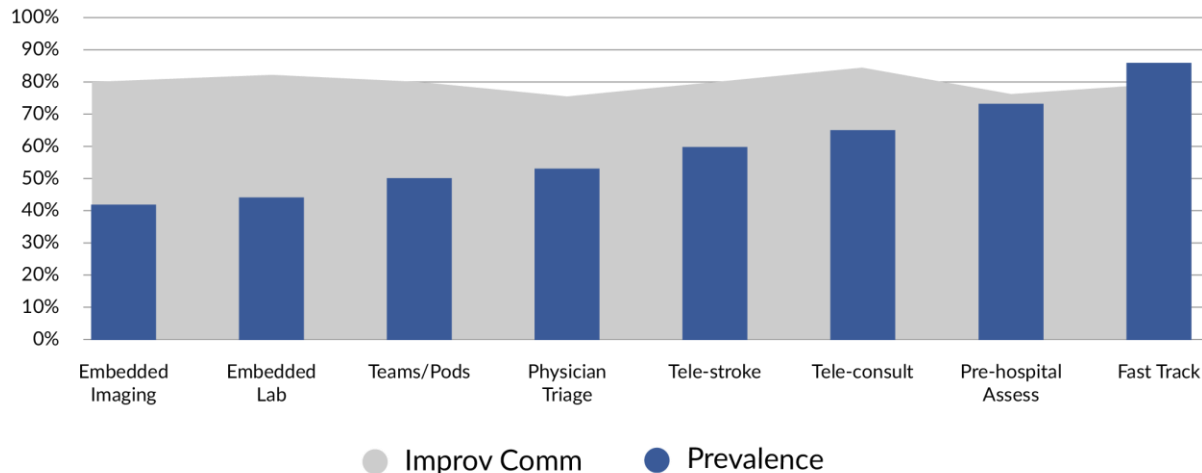
Many Emergency Departments have implemented numerous workflows in order to improve patient flow and care team communication. While most have shown to improve communication effectiveness, those which require infrastructure changes such as embedding imaging or labs into the Emergency Department are less frequent. Many hospitals (75%+) indicate they are implementing Fast Track for low-acuity patients and pre-hospital assessment for high-acuity patients, while nearly 60% of hospitals indicated the rising use of tele-medicine (using voice, video and image sharing to assess patients). These programs were also rated as having the most effective impact outside of infrastructure changes within the hospital.

Fast Track Impact on Wait Times

Over 30 Minutes

● Unimproved in last 12 months

● Improved in last 12 months

_____

● Under 30 Minutes

While many hospitals reported a positive impact of new workflows on care team communication, survey results indicated continued room for improvement. For example, of the emergency departments reporting the use of Fast Track (63%), 78% reported wait times for patients first seeing a physician at over 30 minutes and 50% reported no improvement in that measurement in the last 12 months.
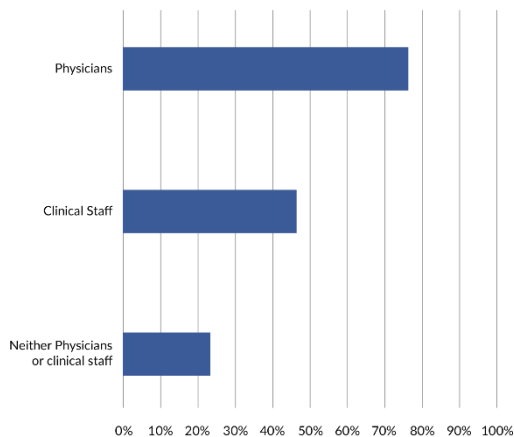
Use of Personal Mobile Communications Increasing

Most Effective Methods

● Prevalence   ● Effectiveness
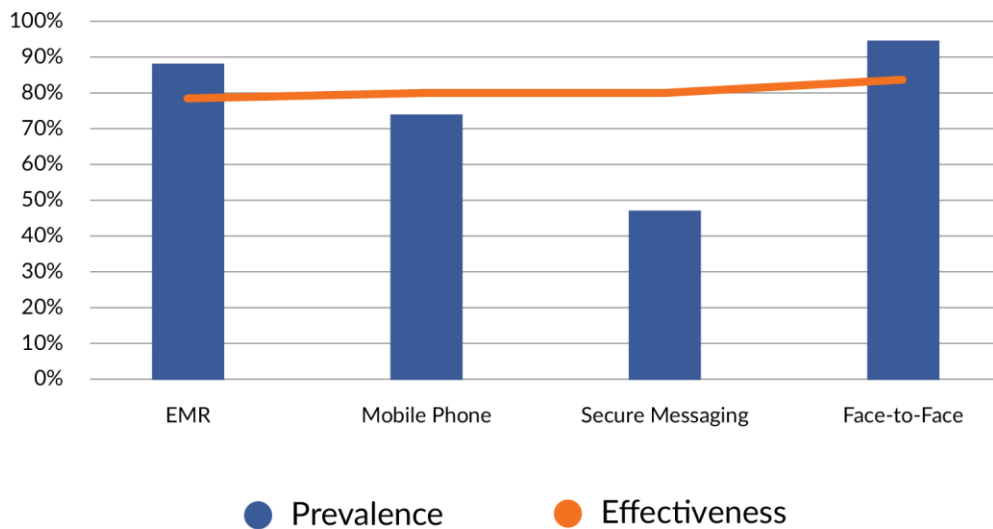
Survey respondents reported that the most effective forms of communication included face-to-face (rated the most effective), secure messaging, mobile phones and the EMR. As noted earlier, many times team members cannot have a face-to-face conversation and need to communicate more than the non-real-time communication available via the EMR. The combination of mobile phones and secure messaging (typically available via mobile devices) were the closest in effectiveness to face-to-face. This combination supports both real-time, notify and non-real-time communication methods. Most respondents indicated no negative impact of using those methods (nearly half of respondents). EMRs were also indicated as an effective communication method, but with some drawbacks, with nearly half of respondents indicating increased cost from staff time to use the EMR and 4 in 10 indicating that the use of that method negatively impacted physician satisfaction.

Along with the rise in mobile devices, one of the challenges hospitals have had to face is whether to allow and support physicians and clinical staff using their own mobile devices in managing patients. Respondents indicated the increasing acceptance of physicians and clinical staff bringing their own devices to work. In addition, over three quarters of respondents indicated that using personal devices for communicating clinical information had a positive impact.

Allowed to Communicate Clinical Information on Personal Device

Impact on Clinical Care