

Keeping Peer-to-Peer Consultations HIPAA Compliant and Discontinue Text Messages: A White Paper

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Introduction

The scenario targeted in this white paper is to address how an outside provider with no relationship to the hospital connects for a specialty care consult. This scenario is very susceptible to a willful HIPAA violation.

The consultation process must be easy to use with the option to be done in real time. Consultation takes the time of two doctors. The more time each doctor must spend results in lost productivity and waste. A consultation can be conducted without charge, or a financial relationship can be established in advance. This white paper evaluates the no fee for the service option, making time and efficiency the most important factors in reducing waste.

Summary

Most medical practices participate in outside consultation. Software systems are needed to make the interactions HIPAA compliant when the consultation includes reviewing a picture or video. The limitation of these solutions is their level of convenience both actual and perceived. An organization is most at risk for HIPAA violations to occur when the tool and workflow are perceived inconvenient.

The most predominant solution for this scenario on the market today is secure text messaging. This works very well and is HIPAA compliant. The difficulty is that users must download an application and then register the far-end device before being able to send the photo or video and may also be training involved. This process includes both physical and verbal steps for the consultation. For the doctor two to three states away, caring for a pediatric burn victim. That delay is often perceived as inconvenient, and may negatively impact the treatment or outcome. For this process to be most successful, advanced partner registration, sign up, and training is most efficient, however, in multistate regional expert centers like the Trauma and Burn team at Children's Hospital Colorado (Children's Colorado), it is not feasible to get all referral centers established up-front.

Scenario Identifying the Problem

The Children's Hospital Colorado Level 1 Pediatric Burn and Trauma Center One Call phone line receives a call from an Emergency Room doctor three states away who has never transferred a patient to Children's Colorado before. In discussing the patient's burns verbally, the out-of-state doctor decides he/she cannot manage the child and calls for a transport. An ambulance takes the child to the local airport for a flight-for-life airplane to transport the patient to Centennial, Colorado where either a helicopter or an ambulance takes the patient to the main hospital on the Anschutz campus in Aurora, Colorado. Two hours later, the patient gets discharged from the Emergency Department because the burns did not warrant being admitted inpatient and the treatment could be done in an outpatient setting. A photo would have averted this situation. If the outside doctor had text messaged the photo, then an incorrect transport would have been averted. A HIPAA violation would also have occurred. These scenarios happen all over the United States, and it is a very difficult problem to solve.



There is a real cost for being noncompliant with HIPAA regulations. Below is a summary of the type of violation and the penalty that may be assessed to the organization. Note the size of the penalty varies based on the cause and correction in behavior of the violator.

HIPAA Violation	Minimum Penalty	Maximum Penalty
Unknowing	\$100 per violation, with an annual maximum of \$15,000 for repeat violations (Note: maximum can be imposed by State Attorneys General regardless of the type of violation)	\$50,000 violation, with an annual maximum of \$1.5 million
Reasonable Cause	\$1,000 per violation, with an annual maximum of \$100,000 for repeat violations	\$50,000 violation, with an annual maximum of \$1.5 million
Willful neglect, but violation is corrected within the required time period	\$10,000 per violation, with an annual maximum of \$250,000 for repeat violations	\$50,000 violation, with an annual maximum of \$1.5 million
Willful neglect, and violation is not corrected within the required time period	\$50,000 per violation, with an annual maximum of \$1.5 million for repeat violations	\$50,000 violation, with an annual maximum of \$1.5 million

American Medical Association: ama-assn.org/practice-management/hipaa-violations-enforcement

Overview

The solution implemented was a custom cloud-based application in Microsoft Azure. The application’s core function was to collect photographs or a video in a secure manner with some identifying information. The Microsoft Azure platform was selected due to the robust infrastructure to scale and process incoming communications. The barriers to using Microsoft Azure were low given the hospital already used Azure in other IT solutions, resulting in very low additional fiscal investment. A Business Associates Agreement had already been signed with Microsoft with security review, allowing for HIPAA compliant storage. Programming the application was the highest cost. An outside organization, Qusitive, was contracted for a project manager and developer to program the application.



Analysis

Project Steps

1. Operational review of app and IT criteria to be established
 - Storage, cost of offering, access methods and rules for users, archive/deletion rules
2. Statement of work contracting
3. Burn team (primary clinical model) interaction with Microsoft and subcontractor for programming
4. Security review
5. Testing (UAT)
6. Release
7. Bug fix with Microsoft and sub-contractor for programming

Requirements of the new solution:

- Immediate download – as fast as a text message
- HIPAA compliant, removes picture(s) after local phone/tablet download (ability to delete from a far end phone by a website is not possible)
- Able to be used via smart phone for sending and receiving. Far end must be mobile capable
- Far end submitter must not require login and be a simple process to allow a send/upload of file(s) with very few steps
- Able to send to whomever is requesting consult without many manual clicks or needing to drop off the call to have the process happen
- Able to be integrated into an EMR
- Technology agnostic
- Simple system with few clicks, able to be used by low tech providers and far end sites

Team to create the product:


- Quisitive (programming company)
 - Project manager .2
 - Programmer .5
 - Interface analyst .2
- Children's Hospital Colorado
 - Telehealth Program Manager
 - Medical Director Telehealth
 - Business Systems Analyst Telehealth
 - Network engineer for install and configuration
- Microsoft
 - Azure consultant rep
 - Account manager

Components of HIPAA compliance and programmed solution to meet clinical requirements

1. Named access or role-based access to the software
 - Active Directory (AD) integration uses network user ID and password security rules along with dual factor authentication when user is located off site
2. Encrypted storage and secure communication route
 - AD features turned on during programming and installation, validated by external security firm
 - Website uses SSL7 for secure communication, validated by outside security firm
3. Far end phone sending information should not store the photo/video
 - The method of entry is a secure website that is not able to make a rule on a smart phone to auto-delete if the user decides to save. The solution was to add a notice to the provider to delete the photo/video from their device to remain HIPAA compliant. The user must click, "Acknowledge" to successfully submit the photo or video.
4. Received data are not part of a patient's EMR and is a communication tool
 - The function to copy from the system and paste into notes is allowed for those patients being consulted who later came to the hospital as patients.
 - The system is programmed to auto-delete records stored after a set number of days, and all new users are trained on this rule.
5. Access to other patients' records
 - A logging system is created to track user access and make the application auditable
6. Outside user's access to information
 - The user receiving the invite to submit photos receives a unique link that is active for one hour to submit the data. No access is granted to other records or parts of the system, validated by outside security firm.

Product Summary

The final product is internally named the Telehealth Photo System. Children’s Colorado team members with access to create and view interactions see the below as their home screen.

Children's Hospital Colorado

TELEHEALTH PHOTO SYSTEM

Frunzi, Gerard


Photo Queue

NEW REQUEST

Other


Date / Time	Patient Name	Patient Location	Call Back	Images
07/16/2018 01:09 PM		wheat Ridge (Colorado)		-

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The user clicks on the orange NEW REQUEST button to start a request. Selects the clinical category or organizational group, the requesting person’s name, the state and either the cell phone number or email address to send the link to.

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TELEHEALTH PHOTO SYSTEM

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New Request

Service *

Other

Requested By (Name) *

Patient Location *

Patient State *

Colorado

Send Request Link Via*

☒ Text (Mobile)

☐ Email

Mobile Phone Number *

(111) 222-3333

CANCEL

SEND REQUEST

A text message or email is sent with the below wording noting the link expires in one hour.

Today 10:24 AM

Please click on this link to send photos using the Children's Hospital Colorado Telehealth Photo System.

<https://telephoto.childrenscolorado.p.azurewebsites.net:443/Submissions/Index?serviceld=99&requestId=a9621d31-3af4-4ecd-9aeb-a9f184131296>

This link will expire in one hour and is good for one patient. If your link expires before you are able to use it, please call us back to receive a new one.

The far end provider fills out the below forms and uploads their photos or one video. A message comes up confirming he/she should delete any PHI off their local phone for HIPAA compliance.

Messages 10:24 AM 87%

telephoto.childrenscolorado.p.azurewe

Children's Hospital Colorado
TELEHEALTH PHOTO SYSTEM

Submission Form

The Children's Hospital Colorado Telehealth Photo System is actively tracked through a secure HIPAA compliant interface.

Upload up to 10 photos.
Choose Files no files selected

Upload a video (.mov and .mp4).
Choose File no file selected

Patient First Name *

Patient Last Name *

Patient Date of Birth *
MM/DD/YYYY

AT&T Wi-Fi 10:26 AM 87%

telephoto.childrenscolorado.p.azurewebsites.net

Children's Hospital Colorado
TELEHEALTH PHOTO SYSTEM

Patient Date of Birth *
MM/DD/YYYY

Call Back Phone Number *
(111) 222-3333

Call Back Person's Name *
Gerard Frunzi

Call Back Person's Title *
Please Select a Title

Brief Description (optional)
Optional Description, e.g. Left Arm

SUBMIT

The Children's Colorado provider sees and clicks on the new record that has been updated to review the pictures. The summary page has thumbnail prints which are low resolution. Clicking onto the picture brings up the high-resolution picture sent from the far end.

Children's Hospital Colorado

TELEHEALTH PHOTO SYSTEM

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Photo Queue

NEW REQUEST

Other

Date / Time	Patient Name	Patient Location	Call Back	Images
08/23/2018 10:24 AM	TestLast, TestFirst	test1 (Colorado)	(720) 777-1234	2
07/16/2018 01:09 PM		wheat Ridge (Colorado)		-

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TELEHEALTH PHOTO SYSTEM

Frunzi, Gerard

Patient Details

The Children's Hospital Colorado Telehealth Photo System is actively tracked through a secure HIPAA compliant interface.

Photos



Conclusion

The Telehealth Photo System is a simple to use HIPAA compliant tool that allows for quick sharing of photos or a video between consulting physicians. This project was developed and implemented successfully due to the partnership amongst Children's Hospital Colorado Telehealth operations, clinical team members, Quisitive the developer, and Microsoft the cloud host on Azure. The application utility centers on ease of use and fast submission by outside partners. Requirements to have no application download or other factors that can add minutes to a consultation request time were met. The product was implemented and trained within the organization successfully.

Currently around 20 consultations per month use the system, primarily dermatology. Use of the application continues to grow into new clinical use-cases. The transfer center at Children's Colorado has begun implementing the use of the Telehealth Photo System to more quickly obtain photos for outside consultation requests.



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