CHAPTER 7

THE CONSEQUENCES OF SECURE MESSAGING FOR ACTORS, COMMUNICATION PROCESSES, AND RELATIONSHIPS

**Introduction**

Secure Messaging use has been influenced by organizational factors; health care professional’s attitudes, social norms, and interpretive schemes; and workflow, work practices, and the flow of information between health care professionals and their patients. In turn, use of Secure Messaging has had a reflexive shaping effect on each of these resulting in both subtle and dramatic changes. With the institutionalism of Secure Messaging within the organization, the system is now in active use at most primary care settings with expansion underway in surgical and specialty care clinics across the country. In addition to the broad range of effects described in Chapter 6, health care professional’s accounts reveal a number of perceived consequences of Secure Messaging use for actors, communication processes, and the relationships between patients and their health care team. This chapter will present study findings related to these consequences.

**Improving Access and Patient Perceptions about Access**

Health care professionals report that Secure Messaging improves patient access and influences patient perceptions about access by enabling better connectivity with the health care team and avoiding some of the difficulties encountered with telephone calls. Health care professionals also note that access can also be perceived by patients as the ability to communicate more directly with one’s health care provider and, despite the triage process, patients perceive that Secure Messaging also improves access in this way. Health care providers report that Secure Messaging is improving patient access and that patients perceive that their health care provider is more accessible to them. Health care providers perceive that Secure Messaging makes it much easier for patients to access their health care team, and also easier for the team to respond directly to patients. Many note the difficulties typically encountered with telephone calls. Patient telephone calls are often routed through centralized call centers, resulting in less direct communication at best, but most often culminating in ‘phone tag’ in which multiple calls are made but synchronous contact is not achieved, and so messages are left or relayed in sequential attempts to communicate.

HCP05: *Oh I think it’ll make it much easier to access us because sending an email is very easy to do. Sometimes when you call and the call doesn’t get through or there’s a phone tree to go through, most people know how to dial directly to our clinic but sometimes there’s a problem. So I think it will be easier for the patients to access us, and they can do it because they know that their message won’t potentially be intercepted, or that it’s secure to do that. And providers will also know that you can simply type an answer to the question, hit reply.*

HCP10: *I think they think they can get me easier, which they like…because we have a call center and phone calls coming to our nurses which may change but right now it’s what we have. Um…and so then it goes to the call center and if they can’t take care of it they forward it to my nurses and then there’s some phone tag usually involved and then the nurses have to talk to me and then they get a response. So they still have to go through my nurse to get to me but it seems like it’s a much straighter path to them, and they actually get an email back from me so they…the ones that have set it up and have done that said that they…they’ve appreciated getting…getting something back from me, so…they seem to think that it’s easier.*

HCP03: *I think it makes them feel as though I’m more accessible. It’s not as BIG a change for me as it would be for some other providers because I usually give me patient’s my office number anyway. And that’s…that’s NOT the norm.*

Health care providers emphasize that many patients have difficulty physically getting to a facility to seek care, commenting that for these patients in particular, Secure Messaging improves access.

HCP07: *There are quite a number of circumstances where patients have hardships getting to our campus. It’s very difficult to access because of parking. We’ve…we’ve way outgrown our space and its quite challenging for patients to drive two and a half hours from…just you know, lots of different circumstances.*

Nurses also report that Secure Messaging improves access and makes patients feel more connected to their health care team. One nurse comments that being able to access the health care team via Secure Messaging is especially important when patients are dealing with a new diagnosis and may forget what was said to them at the visit, or have additional questions after the visit.

NUR08: *Um…I think it’s…it makes the patient feel like they are more connected with us, especially for the patient going through some kind of diagnosis…say diabetes for example. They’ve been diagnosed with diabetes and we’ve given them all of the information. We know that patients only retain 10 to 20% of what we tell them when they’re stressed. That’s the statistic. So when they go home if they could send me a quick email I can respond to that in real time. You know they could send me that and say ‘Hey I can’t remember how to load the lancet’ or ‘I can’t remember how many servings of bread I’m supposed to have a day.’ They can send me a little quick message and they don’t have to wait on me answering the phone or having to come up here. You know they could be stressed just by not knowing something and I can answer their questions. A lot of patients do come back with their thoughts, or they’ll send me a message and say ‘Hey my blood pressure went up today. What should I do?’ and I can help them with it.*

She perceives that Secure Messaging gives her more “real time contact”with the patient and reports that most of the time it deals with little problems that she can solve, which she feels decreases the patient’s stress.

NUR08: *So it gives ME more real time contact with the patient over most of the time it’s little problems. Sometimes its medication refills but a lot of the time it’s something that’s causing them stress and waiting around for either me or Dr. Smith to call them back, it just adds to the stress. So that’s what I like about it!*

Another nurse reports that she thinks that there is a stronger connection because patients really like being able to Secure Message with her, especially since the clinic is so rural and it is sometimes difficult for patients to travel to the clinic.

NUR10: *I think there’s a stronger connection I think because they really like being able to do…to Secure Message me…yeah we’re sort of a specialty…I mean we’re out in the boonies, so…you know it takes a lot for them to have to travel in.*

Nurses also comment about the challenges of adding new methods of access, but as one nurse notes, enhancing access is crucial and gradual improvement is happening over time.

NUR09: *And you know bringing on My HealtheVet and Secure Messaging. Kind of rearranging our schedule and trying to open it up more. We were continuing to try to work on having open access and that’s pretty difficult. You know it’s just that whole care management piece?…that’s um…ah…it’s a GOOD thing, it’s just that you know when you already feel so overwhelmed in your clinic. And you’re already busy from the time you get here until the time you go…it’s really hard to add those extra things, and that’s kind of a challenge…But it’s gradual…and it’s gradually taking place and …and getting there. It’s just going to take more…more time.*

Like their colleagues, pharmacists also report that Secure Messaging improves patient’s access to their health care team and may reduce unnecessary office visits while still meeting patients’ needs. One pharmacist comments that Secure Messaging provides another way for the patient to access their health care team and this makes them feel more confident about being able to reach their health care team when problems arise.

PHARM10: *It definitely…if all Veterans were to use it, it would lessen the face to face interactions I believe. But it just provides another way for the Veteran to access their team, and makes them feel a little bit more confident that if they were to have a problem they would be able to reach someone who could help them.*

Some pharmacists perceive that the impact of Secure Messaging on access will be especially significant for younger Veterans because of their comfort with technology. One pharmacist emphasizes the challenges that Veterans who are working face in trying to call the clinic during the work day.

PHARM08: *I think it’s going to be a positive thing especially for our younger Veteran who may not be able to call the clinic you know during work hours. They’re working somewhere else and don’t have that access so it’s going to improve access for that group of people and I think that they’re comfortable with that format. People use all the social networking sites like Facebook and Twitter and things of that nature. So I think that that technology falls right in line with that group of patients…So it opens…I mean for making sure a patient doesn’t run out of their medications which happens quite frequently, I think that that’s a really helpful tool to give people another way to stay on top of their health and know what’s going on.*

**More Direct Communication**

Health care professionals report that Secure Messaging changes communication by making it more direct. Patients are able to send questions directly to their health care team and health care team members are able to respond directly to these patient inquiries. Although the Secure Messaging triage process could be thought of as less direct in that a message sent by a patient intended for their health care provider may be triaged and handled by another member of the health care team (without the health care provider even seeing the message), health care providers perceive that Secure Messaging is a more direct communication pathway.

HCP10: *So it’s direct. I don’t have to have my nurses calling them again or me trying to call them and leaving a message and sending the alert to the nurse that I TRIED to call and here’s what the patient should be told if they call back. It’s just a lot more direct.*

One health care provider comments that the clinic staff field between 80 and 100 phone calls each day. He notes that with Secure Messaging patients feel that they have better connectivity with him and can contact him directly, and that they are getting answers more quickly. He adds that although there is triage process, he typically responds to all Secure Messages. When a message is occasionally responded to by a Patient Support Assistant (PSA), patients may not really be aware of that, or perceive it as different. As the PACT model is based on the principle of team-based care, triage of patient requests and responses to patients may be handled by any appropriate member of the health care team, although some health care providers choose to handle most messages directly.

HCP09: *I think for some of them it makes them feel like better connectivity with me. And I think part of that’s my own fault. Not ‘fault’ but because I respond to everything so I don’t think they get…they feel like they’re getting the run around and they get answers quicker. You know our PSAs take about 100 calls a day and…patients will get on…yes I don’t know how they do it! Anywhere between 80 and 100…I forget the number right now…100 and something… way too many to actually do anything. So the patients get responses quicker…at least from me. Um…there’s not the run around. They don’t really know that if it does go through a PSA, they don’t really know that part of it.*

Another health care provider reports that Secure Messaging is more direct because rather than having someone call the person and translate what he’s written, instead he can write a response to the patient directly. He also comments that it’s easier for him to write back to a patient than to call the patient back with an explanation or relay the message through an intermediary.

HCP08*: …and it’s a little…it’s a little easier to write back an explanation rather than calling back. These often are things that don’t translate well through an intermediary. In the CPSR/telephone alert system you write a response to an issue and then someone has to call that person and translate what you’ve put into your response… In Secure Messaging, it’s YOUR WORDS that get sent to the patient.*

An Audiologist describes more direct communication as a unique benefit of Secure Messaging for her patients noting that Secure Messaging has been particularly helpful to her as most of her patients have profound hearing loss and cannot use the telephone. She reports that Secure Messaging enables her to communicate more directly with her patients, in contrast to a telephone call in which she would have to talk with someone else on the patient’s behalf.

HCP04: *Now I primarily see patients so I test hearing, fit hearing aids, I prep patients for cochlear implants. I direct the cochlear implant program here, and that’s where Secure Messaging has come in to be so helpful because most of my patients have severe to profound hearing loss and often cannot use the phone. So when we were told we couldn’t use email with them anymore that was a real hindrance. So I actively sought out ways to use email and when I found out about Secure Messaging I asked if I could be part of it… For THIS population it really makes a lot of sense.*

She notes that with Secure Messaging patients will now contact her directly with issues or questions or to schedule a visit.

HCP04: *Well a lot of times my cochlear implant patients will contact me with issues with their equipment or scheduling or sometimes they’ll just have a question about how their device is working, or with a problem that’s going on with their hearing…Patients can get in touch with me fairly quickly, and I can respond to them fairly quickly in a written form, because most of my patients can’t hear very well over the telephone. So I was told initially that using email was an insecure method of contacting patients, which I thought was kind of funny because if I call patients I had to talk with them through their spouse or someone else at the home, Heh Heh heh, and THIS way I can contact them DIRECTLY.*

She perceives that the impact of this direct communication is that it helps these patients to feel more connected and more in control of their own health care.

HCP04: *I think it helps some patients feel more connected. And again I think it helps them feel like they’re more in control of their own health care. They don’t have to have a special device or another person make a phone call. I think it’s good…a good way for them to connect directly.*

Nurses report that patients value Secure Messaging because it eliminates the frustration that they have experienced with centralized telephone call systems. Nurses perceive that patients who use Secure Messaging are able to communicate more directly, and get answers to their questions more quickly.

NUR04: *They love it! Because the other thing is they can get answers. They don’t have to go see the…the other things that happened is we started this new call system here. And it started on the tenth of March and now all the calls that used to come here to our clinic go to a call center at the mother ship…Yeah, and the patients have to push one, two, three, or four…and four will get US, but what it does is it goes through the call center it’s actually…its clerks that pretty much work there. And then if its symptom related then they transfer them to us. And patients are very frustrated by that, because it’s a new system, you know and we’ve got our older patients that are hard of hearing or not too savvy at doing menus versus the younger ones that are used to it because that’s what…that’s all they know. So you know there’s going to be all these different kind of learning curves depending upon what’s …you know, what demographics patients are as far as age and experience. The ones that do Secure Messaging, they get quick responses because you HAVE to respond within two business days. That’s one of the parameters on there.*

NUR09: *…So it’s kind of easier to just direct ‘Hey I need my medication refilled’ and then you take care of it and shoot them back an email that tells them it’s all taken care of and in the mail…So I think those are some of the benefits for patients.*

One nurse explains that because telephone calls to her outpatient clinic are routed through a local non-VA community hospital, patients do not even have the ability to call and leave her a message. With Secure Messaging patients can contact her directly when it is convenient for them.

NUR10: *We’re out in this area where half the time the phone goes to the hospital. It’s not a VA hospital, it’s the community hospital and some…you know they get frustrated with calling in and getting…not getting through. So that was the main reason I did it because I don’t have the…they don’t have the ability to call in and leave me a message…without going through the secretary or going through somebody…And then getting to THAT person is sometimes really difficult because sometimes the phones get transferred over to the community hospital because we’re on their same phone system. So it was a WAY for them to get THROUGH and just leave me a message without having to go through everybody and getting frustrated with the phone system.*

Another nurse reports that information that would have previously been mailed to a patient or that would have required the patient to file a request at the Release of Information Office at the facility can now be sent directly to the patient via Secure Messaging.

NUR07: *…Plus they can mail information…they can Secure Message information to the patient that otherwise they would have had to put in the mail or the patient would have to go through Release of Information to come in and get it. So…that’s been great.*

Likewise, pharmacists also report that Secure Messaging allows patients to contact their health care team more directly and that patients really like the ease of communicating. Pharmacists emphasize the difficulties patients encounter with telephone calls including long wait times, ineffective routing of calls, and unmet patient expectations about the timeliness of returned calls.

PHARM10: *Um…really favorable so far! The ones who are using it really like the…the ease of being able to communicate with their team, and not having to go around from phone to phone trying to find the person that they can relay their message to. So it’s been…we’ve had some good feedback.*

One pharmacist comments that older patients that have computer access may actually prefer using the computer to communicate with their health care team because it avoids these problems. Although centralized patient call centers are intended to improve efficiency, they have a negative effect on communication by causing wait times for patients, and often requiring call routing that can be inefficient.

PHARM06: *So one of the things that I think, certainly at [our site], is that Secure Messaging…it allows the patient to kind of more directly contact their health care team…you know with our age demographic I think that, you know, you’d think that it would be the younger patients that would appreciate…that would warm up to it. But the patients that are older that have computer access? I think that they just actually prefer doing computer based communication only because when they…our patient call center wait times are very long and I think that sometimes there’s a lot of routing of calls that doesn’t need to happen. You know the patients are getting transferred to the wrong people or their phone calls are not being returned in the time that they’re expecting them to be returned.*

**More Focused Communication**

Health care professionals also report that Secure Messaging has resulted in more focused communication with patients. One health care provider comments that he likes Secure Messaging because he can provide specific answers to very specific questions from patients, and spend less time on what he perceives to be ancillary when he is communicating with patients.

HCP09: *Well from my perspective, and I’m very computer comfortable, I like Secure Messaging…well I like the idea of Secure Messaging a lot. Um…I like getting to the very specific questions and answering very specifically to the question, not having to spend a lot of time with all of the ancillary stuff that comes up when you’re communicating with patients.*

He adds that Secure Messages enables patients to focus on specific questions or needs commenting that he doesn’t have time to hear about personal things and will often avoid calling patients on the telephone, often having his nurse call them instead.

HCP09: *We pretty much stick to the point. Like I said I’ve been taking care of these patients for a long time so I call them up…I try to avoid actually calling them up. I ask my nurses actually to call some of them up because I try and avoid getting on the phone with them. Although I like them, I’m not…you know I don’t have time to hear about their wife’s medical problems, their dog’s medical problems, they’re going on a shoot or something next weekend, that kind of thing…Um…so it really…much better sticking to the point or even if they want to share that stuff with me, you know all I have to do is just say ‘Great, have a nice weekend. Have a good time… and…take the pills, like I said.’*

Nurses also report that the communication via Secure Messaging is more focused than telephone communication. Nurses perceive that an advantage of Secure Messaging over telephone calls is that telephone calls are sometimes difficult to end, whereas Secure Messages typically focus on a specific need.

NUR09: …*And then it kind of eliminates that ‘Oh and by the way…while I’ve got you on the phone…I also need this and this and this.’*

NUR07: *The stuff that you know…patients when they got on the phone lots of times will…the call will…it’s difficult to end the call…whereas obviously that’s not the case with Secure Messaging. And so the call will go on longer and they don’t want to be rude to the patient, etc. Um…so that’s a plus.*

Likewise, pharmacists also report that patient requests via Secure Messaging are focused, commenting that speaking to a patient on the telephone will often take longer because patients tend to talk about many different issues. They perceive that with Secure Messaging, staff can more easily answer the patient’s specific question, making it more efficient.

PHARM09: *And also like I said it’s usually a focused request that they have and so…what I mean by ‘focused’ is usually addressing one or two things whereas if I speak to them over the phone it may last a lot longer so…because of just many issues that they are actually talking about. And they’re usually more focused so instead of talking about maybe something else, you know, that doesn’t relate to their question at hand or issue at hand. This allows me just to answer that question…They may be talking about, you know, their family member, they went on a trip and they’ll say…and I do enjoy that too as well, but it just…it just doesn’t work with the time you have available to you to help the Veterans, you know. Secure Messaging makes it a lot more quicker and faster.*

**Changing Communication Patterns**

Health care professional’s accounts reveal that Secure Messaging also changes the patterns of communication with patients. Related themes that emerge from these accounts include the benefits of asynchronicity for both patients and staff, greater frequency of communication as a result of asynchronicity, and a lowering of the threshold at which patients will initiate communication with their health care team. Health care professionals also report that Secure Messaging changes communication patterns with family members and caregivers, perceiving this as a significant value given the important role that they often play in supporting the patient. Likewise, health care professionals comment about improvements in co-managed care, noting that Secure Messaging enables improved communication about care received in non-VA settings.

*Asynchronicity*

Health care professionals consistently report that for many kinds of communication needs an asynchronous Secure Message is a more effective way to support patient communication with the health care team. Health care professionals characterize Secure Messaging as timely and efficient. Some health care professionals report that the written nature of an asynchronous Secure Messaging also allows them to capture the patient’s voice by copying their message into the VA EHR. Others point out that the written nature of Secure Messaging communication provides patients with the ability to have asynchronous access to education or instructions provided by the health care team, referring to the information durability built into the Secure Messaging system.

Health care providers report that the asynchronous nature of Secure Messaging communication allows patients to communicate when they are thinking about an issue or when it is convenient for them as opposed to trying to reach a health care provider by telephone which can be very difficult.

HCP03: *Well I think it makes…makes it easy for them to put those things into a message whenever they are thinking about it, or whenever it’s convenient as opposed to them trying to track me down between eight and five.*

One health care provider comments that he finds it interesting that a number of patients use the system to send Secure Messages during the late evening or early morning hours, pointing to the benefit of asynchronous communication.

HCP08: *It’s interesting to watch the time of the generation of the message. Actually it’s a fair number of folks that are sitting down and opening up My HealtheVet at eleven, twelve, one, two in the morning.*

In addition to the convenience of electronic communication, Secure Messaging allows patients to communicate in their own time and to be more thoughtful in contrast to a face-to-face visit.

HCP01: *I think people get to communicate without the intensity of a visit. They get to do it in their own time. They get to be more thoughtful. Um…I...I...it’s just a slam dunk…for them!*

Health care providers emphasize the convenience of asynchronous communication as a benefit for staff as well as patients.

HCP09: *I like asynchronous communication in that I can answer it whenever I want to, like you know when I’m on leave, not on leave but when I’m going to be at [another site] I’ll still be able to respond through the web portal. I like the whole concept…I can do it when it’s convenient for me. They can do it when it’s convenient for them.*

Many accounts specifically reference the avoidance of ‘phone tag’ as a significant benefit resulting from the asynchronous nature of Secure Messaging. As one health care provider explains, Secure Messaging has been very helpful for scheduling patients and setting up consults in addition to responding to basic questions. She says that for scheduling needs it is much easier to communicate with patients via Secure Messaging than trying to reach patients by telephone.

HCP10: *But for the most part, it’s been very helpful for scheduling or people asking for consults, or just asking basic questions. Certainly for the scheduling it’s so much easier than phone tag, trying to get a hold of them to get things.*

She emphasizes that even if a Secure Messaging request requires multiple messages between the patient and the health care team (“email tag”), it is still more timely and efficient than phone tag.

HCP10: *Well, I’ve been trying to take over actually some of the phone calls from the nurses to call patients back with lab results or things. Or if someone called in with an issue if we find that they have Secure Messaging trying to take care of it that way, but…it just…it saves a lot of phone tag. Even if there’s some email tag, that doesn’t seem to bog things down as much as the patient calling in with that concern and us having to get a hold of them again.*

She reports that the biggest selling point with other health care providers has been that Secure Messaging replaces a phone call and eliminates phone tag. She notes that with planning underway to expand the use of Secure Messaging in other clinic settings she anticipates staff resistance but plans to continue to emphasize this benefit.

HCP10: *We’re trying to get our MOVE weight loss program up and running so that they can email with the dietician and we’re trying to make sure that our PharmDs are on there because they do a pharmacy clinic for HIV, cholesterol, and hypertension…so that patients can just email their blood pressure readings or blood sugar readings in. I know we’ve talked about expanding it into behavioral health next as one of the subspecialties. And then it will probably take a little bit more work to convince some of our specialists to do it. But again I think if we stress the whole…it bypasses the call center. It goes right to you, instead of a phone call and phone tag. It’s email, where you don’t have to worry about whether you can catch them at home. They will read their email. If they sent you one they’ll be looking for a response…They will keep an eye out for their email instead of you guys trying to catch each other on the phone, so…that’s been our biggest selling point so far.*

Although communication is asynchronous, health care providers perceive that they are able to easily save the Secure Messaging interaction as a progress note in CPRS, which them makes it accessible to all members of the health care team.

HCP04: *…. and it’s a little easier to get the message in a CPRS note as well, so…*

Health care providers also report that a secondary benefit of Secure Messaging is that enables documentation in the medical record using the patient’s own words. This rich description can easily be copied to the record using the feature that is built in to Secure Messaging. One health care provide comments that he finds this description to be valuable and often saves the message content as a note in the VA EHR.

HCP03: *And then the other thing that’s been really helpful is when patients send in a description of what they’re feeling or what their problem is. It’s sometimes REALLY helpful to have that. Um…and if they were in a face to face and trying to describe it then I would have HEARD what they said but I wouldn’t have been able to type it all, the way that they said it. And so I think that’s really meaningful to have…sometimes have THEIR description available in the record…I think that…you do a much better job diagnosing people when you have THEIR description and you actually listen to it. Um…and if somebody had…if somebody gives me that description and I try to …get part of it into the record it’s certainly not as detailed or rich as what they would have said if they had written it down. So if somebody else needed to see that information it becomes very helpful. I think it’s really helpful to have that! I’ve not heard anybody else say ‘Gosh that was nice to have his description in there’ but…when I go back and look at those it’s really kind of …kind of amazing.*

Another health care provider reports that one of his patients is a writer and that he frequently writes detailed messages to him which he then copies to the VA EHR. He perceives that the patient then feels that he is able to update his own medical record and keep the health care provider aware of what’s going on.

HCP09: *I’ve got one guy who’s actually published a couple of books and he is a frequent writer to me. And it’s very nice to read. Ha ha ha, Yeah…But you know I get the…anyway he’s got some medical problems now so I get very detailed stuff and I say ‘Thanks you know for keeping me informed with what’s going on. I’ll include this in your medical record.’ And I include the parts…the appropriate messages into his chart, you know. So HE feels like he’s being able to update his medical record, and keep me aware of what’s going on. I know what’s going on.*

Likewise, nursing accounts emphasize the benefit of asynchronous Secure Messaging in the avoidance of phone tag, noting that it is often difficult to reach patients by telephone, and likewise patients often have difficulty getting in touch with the right person with they call the clinic.

NUR01: *I mean we’ve…we do…we’ve done preplanning phone calls, but it’s really hard to reach a patient…via phone. And if you miss them the first time, what do you do? You just pass over that. At least if you could send a Secure Messaging you…a Secure Message with enough lead time, chances are the patient’s going to read that before their appointment.*

NUR04: *…Not having to go through different phone calls and be bounced all over the place. I mean you’re there, you’re there…it cuts that part of trying to communicate with your provider. And I know they do this on the civilian side because I can…they email me lab work and stuff from my civilian physician.*

NUR05: *I want Secure Messaging…I would rather that people be doing that. If you’ve got a computer, and you know how to go online, to do a poker game or whatever else, or look up whatever you’re looking up…how come you cannot do that THAT way?...You know I’d like that instead of the phone tag I get. ‘I have a question, call me!’ Great so now I’m trying to get a hold of the patient, who’s not at home, or I’m leaving messages and they’re calling me back. And I’d really like to cut down on the phone tag I play.*

One nurse reports that she is often on the telephone during the day and trying to communicate with patients by telephone usually results in “constant phone tag.” She explains that patient telephone calls first go to a call center, and then are routed on to her if needed. She reports that Secure Messaging eliminates phone tag, emphasizing that it is easier to get direct requests via Secure Messaging which she can then respond to quickly with whatever is needed by the patient.

NUR09: *Well I think there are a lot of benefits to it! For one thing it prevents phone tag that we end up with from a patient calling us and leaving us a message, and then we have to call him back. And we have a call center here so the patients…the phones don’t even come directly to me…they go to [another site], you know to the call center. And then if THEY can take care of it they will but if it’s something that they need to get a message to us, I’m so often on the phone that they end up leaving me a message and then we play the constant phone tag. So it’s eliminated that!*

Another nurse comments that Secure Messaging has provided a safety zone for patients.

NUR04*: Hmmm…we have a patient. He’s a young patient, he’s in his forties, and he has cancer and he’s going through chemotherapy. And he needs a lot of support and so he’s been able to send messages. And sometimes he can’t sleep at night. He’s up at two or three in the morning and he’s able to get online and write what he needs to send to the provider and then every morning I read it and I can reassign it to her, or I can take care of it. And it’s…it’s…yes it’s given the patient a safety zone.*

Like health care providers, nurses perceive that the asynchronicity of Secure Messaging is also a benefit for staff since they can respond to Secure Messages on their own time and within their daily workflow.

NUR06: *Yeah I think for the staff also they can answer the messages um…on their own time. It’s not like when the vet calls in and you have to transfer the call down and they have to take it right then and there. They can, you know, answer the messages whenever they have the ability to do so…we actually have set up an electronic communication device that works pretty well but prior to that? Yes it was a huge issue. Ha ha ha…trying to get anybody to answer the phone.*

Another nurse also points out that in contrast to telephone calls that require a synchronous response, staff can manage Secure Messaging when there is a lull in their workload. She also notes that Secure Messaging works out much better than telephone calls which she says can be disruptive and compete for the time of staff who are attending to patients in face-to-face encounters.

NUR07: *Um…it fits in nicely in that the phone calls that come in…you know they demand us to answer them right now, whereas Secure Messaging the staff can be doing things in clinic and when there’s a lull, they’ll check their Secure Messaging…and you know it’s asynchronous. So it works out much better because it’s not competing for the same person who’s rooming patients…to do it right now, whereas the phone calls you know require somebody to be answering the phones at the same time they’re supposed to be doing some other unit of work…So that’s the biggest plus.*

Nurses also emphasize that an additional benefit of the asynchronous nature of Secure Messaging is the provision of patient education or instructions in writing since the patient can then refer back to the information at any time.

NUR03: *The biggest thing that I would say is beneficial though is because it provides them, for patient education, it provides them in black and white something they can refer back to, and they can know exactly what it was, what was our plan? Why did we decide that? And what should come next?*

One nurse tells the story of a patient to whom she sent a Secure Message with his lab results but also quick reminders and tips that he could refer back to. She emphasizes that while Secure Messaging can be a dialogue and provide the patient with timely information, it also differs from a verbal discussion in that the patient can refer back to it later.

NUR03: *I had a guy who I was kind of counseling. His labs had come back. His diabetes was out of control, and so just because that’s one of my little pet topics I had sent him a message with just some quick reminders about…you know, ‘This is what your lab result showed and I’m a little bit concerned that you might be having this problem or that problem. Just consider these things and hypo precautions and things like that.’ So, not anything that I was importing from elsewhere, but still information that he could refer back to. I think…the thing I always tell people when I’m trying to encourage them to think about Secure Messaging, is that it provides you a black and white place to get information that you can refer back to about your health.*

Similar to comments from health care providers which emphasize the value of capturing the patient’s voice in their descriptions of issues, one nurse also notes that with Secure Messaging she can easily copy and paste information into the EHR in the patient’s own words.

Likewise, pharmacists emphasize that the asynchronous nature of Secure Messaging is a significant benefit.

PHARM06: *Um…and then I think that our nurses and our health care technicians are incredible at responding, first of all in their promptness of responding to the patient, and at the completeness of answering a question. If the patient comes back with another comment of you know ‘This isn’t exactly clear to me could you explain it more?’ or “I know that this is something totally unrelated but I also have this question about what’s going on with my diabetes’ or ‘with my prescriptions’ or whatever. It always gets taken care of quickly and absolutely completely.*

One pharmacist reports that the biggest advantage of using Secure Messaging is that there is a quicker response time from the patient versus having to call them on the phone and play phone tag. She says that the other big benefit of Secure Messaging is convenience for the patient.

PHARM10: *Um… the really big thing for us is the quicker follow up time. You know being able to send them a message and get a response from THEM quickly versus having to call them and have…play phone tag, you know going back and forth leaving messages. That was the best…that was the best thing that I’ve noticed so far, from our end…besides the patient…convenience for the patient.*

Another pharmacist perceives that once staff are routinely using Secure Messaging, they see that it takes less time for them to respond to a Secure Message than to contact a patient by telephone. She comments that it can take her an entire day to make contact with a patient via telephone. She adds that her approach to implementation with health care teams has been to serve as the triage person temporarily so that staff can experience this benefit first hand without becoming overwhelmed.

PHARM04: *You know…they see that it’s really not an increase in workload. It takes two seconds sometimes to respond to an email, but it takes a whole day to get back to a patient over the phone.*

Like their colleagues, pharmacists also report that the benefit of asynchronicity is that they can address patient questions when time allows as opposed to when they are seeing patients.

PHARM09: *Um…probably allowing for me to be able to address the question, like I mentioned before, when I do have time…as opposed to when I’m staffing and I’m actually seeing patients for scheduled appointments or seeing drop in patients. This allows me to really kind of deal with it…to take my time to be able to address them when I do have some extra time.*

*More Frequent Communication*

Health care professionals report that Secure Messaging increases communication with patients by enabling communication between face-to-face visits, supporting conversations via Secure Messaging interactions, and by lowering the threshold at which patients will initiate communication with their health care team. They emphasize that the impact of this increased communication is to improve the nature and quality of the face-to-face patient visit.

Health care providers report that Secure Messaging enables more frequent communication between visits allowing them to know their patients better, and to find out what their patient’s value systems are. One health care provider describes this as an opportunity to initiate a dialogue with the patient about other issues that may impact their success.

HCP07: *… it gives you a conversation that you might not have otherwise had, except that you see them once every seven to eight months or nine months or a year, you now have this interjected conversation piece that’s going on that allows you to find out what their value system is, what their reasons are, what the barriers are, how is it that they’re able to be successful with this piece or that piece. And then you can launch a change talk about other issues that may be the underlying root cause of why they’ve never been successful in the first place…So it’s a different kind of information gathering journey I would say.*

Another health care provider emphasizes that increased communication via Secure Messaging is also more efficient, in comparison to communicating back and forth via ‘snail mail.’

HCP07: *It provides an additional resource to the Veteran or the Veteran family for improved communication and EFFICIENT communication.* *It’s not snail mail you know it comes within a three day period versus a seven day period.*

When asked how Secure Messaging has changed things, one health care provider comments that she communicates more with patients, and in different ways. She tells a story about a patient and his wife with whom she communicates with via Secure Messaging and notes that the increased communication helps her to learn more about her patients and keep track of how they are managing day to day. She describes Secure Messaging as enabling more continuous communication which then allows for a different conversation during the face-to-face patient visit.

HCP01: *…so I have a different conversation while I see a patient. What’s happened now with secure email is that I have continuous conversations through my computer.*

She elaborates that use of Secure Messaging increases her knowledge of the patient. Communication with patients in between face-to-face visits allows her to know her patients better which leads to greater comfort and better ability to co-manage care together with the patient and their family.

HCP01: *Well in addition to what I said about improving access, improving coordination…increasing my knowledge of the patients…between visits…and learning more about your patients… But that whole paradox of …even though it’s a computer communication, I actually know the patients better…*

Similarly another health care provider also emphasizes the positive impact of Secure Messaging communication on the face-to-face visit noting that patients can provide information in advance of their visit enabling her to focus the visit on the patient’s agenda during the visit. She reports that using Secure Messaging for pre-visit work ensures that time during the clinical visit is not consumed with administrative tasks.

HCP07: *Everyone else who’s using it…we’re doing a lot of pre-work so when a patient comes in to see the provider many of the questions have been outlined and we’ve been able to address ordering a prosthetic item or updating medications with a reconciliation with their cabinet at home via Secure Messaging. You know ‘I have this medication. I just saw my outside cardiologist. I’m going to bring…’ You know ‘I had this and this done.’ And I can send an email back and say ‘Can you bring the electrocardiograph and stress test results with you to the visit that you’re having with me in two weeks?’ And so when they COME, my thirty minutes with them is not consumed with administrative tasks…I would say that it’s improved that.*

She says that instead of going through the process of requesting the documentation at the visit she will already have the information to review and can spend the visit time on more current issues and focus on the patient’s agenda. She perceives that this has improved the use of the clinical visit time.

HCP07: *Asking for the release of information forms to be filled out to GET the documentation that we really NEED to review. I have it already. It’s simplified and I can spend more time on current issues that the Veteran really needs to…his agenda…to me.*

She reports that Secure Messaging has affected the kinds of face-to-face interactions that she has with her patients in a very positive way and improved the flow of in-person visits.

HCP07: *Um…I would say that it affects them all to date in a very positive way. Um…the face to face visits seem to have a better flow. I have the patient set an agenda when I first walk into the room rather than ‘What are you here for?’ I say ‘What would YOU like to accomplish in this visit?’ And if they’ve been Secure Messaging me, then we’ve taken care of a lot of their list that they want to take forward to the provider, and I usually know…and we launch from there in the direction that the patient really wants to travel.*

Nurses report that Secure Messaging increases communication while decreasing the frustration that patients often experience with the telephone call centers. One nurse comments that this improved communication between patients and their health care team gives patients a feeling of confidence, control, and self-management.

NUR04: *Oh it’s improved dramatically. Not only the patient…well I think it gives patients a little feeling of control and self-management for themselves. And they know they’re going to get a response. And…I don’t know it’s just…I just think it’s improved dramatically. That’s my bottom line.*

Another nurse emphasizes that more frequent communication improves patient safety.

NUR04: *…we have a patient. He’s a young patient, he’s in his forties, and he has cancer and he’s going through chemotherapy. And he needs a lot of support and so he’s been able to send messages. And sometimes he can’t sleep at night. He’s up at two or three in the morning and he’s able to get online and write what he needs to send to the provider and then every morning I read it and I can reassign it to her, or I can take care of it. And it’s…it’s…yes it’s given the patient a safety zone…And I think that’s really really important.*

Pharmacists also report that Secure Messaging increases communication with patients. One pharmacist emphasizes that communication fosters trust between the patient and their health care provider, and that trust fosters improved communication. He comments that with Secure Messaging patients are encouraged to play an active role in communicating with their health care team about their medications and to make use of the tools available to support that communication. He perceives that increased communication has the impact of preventing or helping to resolve medication issues, and notes that communication also decreases inappropriate medication refills. He emphasizes that the interactive nature of Secure Messaging is beneficial because it provides Veterans with a way of getting timely feedback. Another pharmacist perceives that patients value the person-to-person connection that happens over Secure Messaging, in contrast to other less interactive systems. She notes that although patients can use the online prescription refill system, they don’t receive a personal confirmation that their request was successful. She emphasizes that with Secure Messaging, patients may feel that they can ‘talk’ to staff and perceives that this feedback mechanism is what is different for a patient than completing a web based form or following telephone prompts with an automated telephone line.

PHARM04: *They want to make sure that somebody from pharmacist tells them ‘it’s going to be mailed’ when it’s due.*

As an example she tells the story of a particular patient who would become anxious about receiving his sleeping medication when his refill was becoming due. She says that by using Secure Messaging, he was able to communicate with the health care team to check on the status of his refill and confirm that it had been ordered. She perceives that this prevented him from visiting the pharmacy to inquire, and also made him feel more comfortable.

PHARM04: *I have a patient actually who is very attached to his sleeping medication and he used to get very anxious if the medication is um…maybe mailed a day later after he was expecting it. Or maybe he was expecting it to be mailed in the morning. He called to pharmacy if it was mailed in the afternoon; you know it was not mailed in the morning. He’s very anxious. So um…for that specific patient you know other than he might have issues, you know maybe he needs to be on other medications…but um…it was good. It gave him comfort level that you know he is emailing me and I’m reassuring him that I’ll mail it. I get the email every month. You know ‘I’m so sorry. I…it says that it’s going to be mailed on the 25th. I’m going to be running out on the 25th. I want to make sure it’s THERE on the 25th. It’s not going to be mailed on this one; it’s going to be delivered to my house.’ So it’s good. It’s kept him out of my pharmacy. You know because he used to come a lot for refills early because he’s worried. Um…so it was good. It was a good experience with that patient. It definitely made him feel comfortable with pharmacy.*

*Lowering the Threshold at Which Patients Initiate Communication*

One distinct theme that emerges from health care professional accounts is that Secure Messaging lowers the threshold at which patients will initiate communication with their health care team. This theme was particularly evident in health care provider accounts and perceived by health care providers as a positive consequence. Interestingly, while nurses and pharmacists also report that Secure Messaging lowers the communication threshold, they tend to talk about it differently, commenting for example that it has had minimal negative impact.

Health care providers report that Secure Messaging has increased communication with patients by lowering the threshold at which patients will initiate communication, leading patients to share information that they might not otherwise have shared. Health care providers perceive that this increased communication is beneficial and can lead to positive outcomes. One health care provider reports that this aspect of Secure Messaging has “made her a better doctor.”

HCP01: …*would they have called me and told me that? On the phone? I’m not sure! I think …I think…I think that physicians…I think patients are behaving differently because we’ve lowered the threshold, to share the information. And so …and because of that I get to be more diligent.*

HCP03: *I think there’s MORE of it. I think they’re more willing or apt to send a message as opposed to thinking that they’re bothering you with…I think they feel as though it’s not harassing you or bothering you with phone calls and so they’re more willing to send messages.*

Another health care provider comments that if an issue is important enough to a patient that they send a Secure Message, it is an issue worth addressing, even if the response from the health care provider is to wait and see what happens.

HCP03: *I get some messages from patients that I think are not…not especially important. But they’re…they’re on their mind at the time? Small pains or a question about something that if they had waited a day or two would have gone away, or…that they might not have called about. They might have waited til the next visit to mention, but they’re willing to put it in an email…Yeah I think I hear about some things that are going on with them…more than I would have if I waited to hear about it in a visit or if they had waited until it was serious enough for them to think it warranted a phone call. Sometimes it feels…it seems a little…sometimes it feels a little trivial but, you know if it’s important enough to them it probably…it’s worth addressing. I’m finding that for some of these things, you know the response often has to be ‘well this may go away in the next few days. Let me know if it doesn’t.’*

He describes an example in which Secure Messaging communication was an effective way for one of his patients to report symptoms to him, which ultimately resulted in a needed clinical intervention.

HCP03: *I have another patient who just underwent bypass grafting and he was feeling pretty tired at home and wondered why he was so tired. That turned out to be important because his hemoglobin had actually not come up since surgery. He was probably iron deficient and so… he said he was still fatigued and I said ‘why don’t you…when you’re in next Friday…’ and I looked at his chart and couldn’t see that he had a future appointment and I said ‘well would you…could you come in and get some blood work done?’ and he said ‘well I come every Friday to see the Mental Health.’ Well Mental Health doesn’t use our system to schedule appointments, which drives us nuts. So I said ‘well when you come in just get your blood work done and then I’ll send you the results.’ And when his iron came back really low I called him to talk to him, instead of sending him a message about it. So he got started on iron.*

He perceives that Secure Messaging has the impact of lowering the threshold at which a patient decides to initiate communication with their health care team because it is easier and more convenient. He notes that at least some of the time, these things are things that the health care provider should know about.

HCP03: *…but I also have just…I’ve been surprised…not surprised, um…to see some messages that patients would probably not bother to call about. I think they find it easier and more convenient so they mention things, sometimes things that you should know about and it’s really helpful, and sometimes things that you think ‘Gosh if they waited a day, that would’ve been gone.’*

Another health care provider comments on how Secure Messaging is lowering the threshold for communication by describing an interaction with a particular patient whom he had referred to a smoking cessation program. He notes that the interaction began as a complaint from the patient, but that it led to a conversation with the patient in which clinical care was provided. He describes the kinds of messages that he receives via Secure Messaging as ‘small, quick response, one hit things’rather than big discussions, noting that these are often follow-on to routine care.

HCP06: *…one was earlier today was smoking cessation. And it was a follow on from a message in which I had referred her to smoking cessation clinic and she didn’t like her exchange with the pharmacist. She was a little bit grumpy. I mean if the patient was a little bit displeased and kind of let it go, but because it is such a low threshold for her to contact me she contacted me to complain. But it led to a conversation where she said ‘But I’d really like to quit smoking, can I try Chantix?’ You know, a pharmaceutical…and I said ‘Yeah.’ And so you know clinical care was provided there. Another guy lives two hours away from Boise and he’s a pilot and he needs a flight physical and he wanted to send me his blood pressures so that I could document that his blood pressure is well controlled. So I told him to do so…to send me the form. So you know most of those…it’s mostly things around that small, quick response, one hit things and I haven’t got a lot of ‘Doc I need more pain meds, please give me more. I really don’t need that’ you know big discussions…you know chronic pain meds. I haven’t got the ‘Oh I have chest pain’ or ‘I’m short of breath, what’s going on?’ It’s mainly just kind of the little follow on to you know routine clinical care.*

He points out that there is still somewhat of a barrier in that patients have to go to the website and log in to send a Secure Message, calling that “an extra layer of protection” so that a patient will think about it before deciding to send a Secure Message.

HCP06: *Yeah, yeah, I mean there’s still somewhat of a barrier in that they have to you know go to the website. It’s not just from their email, so think that’s one extra layer of protection. The patient thinks ‘Really should I do this?’ So um…you know it might be…there’s still some technological and logistical barriers but that you know to some extent that might be okay.*

He perceives that Secure Messaging improves patient access but also lowers the threshold of communication.

HCP06: *Well I mean there’s a …who was it, […]? Had this diagram where he imagined a thousand patients as the big square, and then the smaller square within that, a fraction of them had symptoms…and a fraction of those seek medical advice. And a fraction of those actually talk to the doctor. And a fraction of those get admitted, and a fraction of those get admitted to a tertiary academic hospital. That was kind of how he conceptualized patient access. And that’s currently been validated you know thirty years later with utilization data and what would be interesting to me is to see how that fraction of those that seek advice when they have symptoms has changed. Could there be another layer in there? Instead of it being face to face visits which is tough to get, a phone call which is also pretty tough to get, now it’s Secure Messaging. So it improves access but it also lowers that threshold. So maybe some things that aren’t as necessary for access, like just ‘I’m annoyed with something’ people are able to communicate that way. So that’s just how I conceptualize the threshold being lowered.*

In contrast, one health care provider comments that everything that she has received via Secure Messaging she probably would have otherwise received another way. She adds that patients may have a question but feel more comfortable sending it by Secure Messaging.

HCP10: *I have one gentleman who has some personality issues who tends to…I don’t know, let’s say maybe not use it appropriately, but I think he would probably ask those questions or say those things no matter what…Except for the one sort of socially inappropriate young man, I think everything that I got on Secure Messaging I would have seen otherwise…I would have had an email or a phone call about that otherwise, so…And I don’t know that it’s a bad thing to answer their questions. If they had a question about it but for some reason they didn’t feel comfortable calling but it’s still something that they want to know about their own health, that’s the worst thing that we have to take care of.*

Interestingly, nurses and pharmacists perceive the concept of lowering the threshold differently than health care providers. When I ask her to comment about the concept, one nurse says that she finds that patients use Secure Messaging appropriately and send something only if it is pertinent. She comments that patients respect the fact that Secure Messaging is a tool and that she is busy.

NUR10: *I just find that it’s really appropriate. I haven’t had anybody um…you know, bug me on this. I mean they still respect the fact that it’s a tool and that I’m real busy and so they don’t just send you know…nothing…they send it if it’s pertinent.*

Like nurses, pharmacists appear to perceive the concept of lowering the threshold as potentially negative. When I ask her to comment about her experience with Secure Messaging lowering the threshold, one pharmacist says that that because there are many Veterans currently using it, they “have not been faced with this problem much.” She adds that it is difficult to direct patients about how they should use Secure Messaging.

PHARM10: *Right and that’s…that comes back to the case of the patient who was frequently messaging the team…for other concerns, and you know problems. It’s difficult to kind of direct the patient and have them…tell them that this is what this is actually for. Um…but…I don’t know, I feel like we have…we don’t have as many Veterans on it so we’re not faced with this problem as much…if that makes sense.*

*Changing Communication with Caregivers and Family Members*

Some health care providers comment on the value of Secure Messaging with a patient’s caregivers or family members even though the organization has not yet provided a way to support this and so it likely involves the patient choosing to share their account credentials. One health care provider reports that communication with family members via Secure Messaging has decreased the need for face-to-face visits, and made visits that do occur more efficient. She also notes that it has made the Veteran’s family feel connected and that their needs are met because they’ve been able to communicate with the clinic in a different way.

HCP07: *Um…it…relieves caregivers if they have access for their family member who can’t communicate for themselves. I have Alzheimer’s patients whose daughters are communicating with me because they’re the caregivers. I have brain injured young Veterans from OEF/OIF returning from Iraq and Afghanistan whose wives are caring for them or mothers are caring for them. I have spinal cord injury patients or traumatic brain injury patients whose wives regularly communicate and that’s decreased face to face visits and made face to face visits more efficient. But the Veteran family feels connected and feels like their needs are met because they’ve able to access the clinic in a different way… I have patients who have had laryngoscopy from head/neck cancer who can’t speak via telephone. Their sister or their daughter, wife…whatever will communicate on Secure Messaging.*

Another health care provider who is an Audiologist notes that a family member or caregiver is usually present during the face-to-face visit to assist with communication with patient’s who may have profound hearing loss. She emphasizes that because of the impact of a patient’s hearing loss on the entire family, family and caregivers will also benefit from being able to communicate via Secure Messaging.

HCP04: *In our department that’s usually something that’s pretty helpful because…first of all they usually bring somebody else along because they often don’t understand and aren’t able to communicate well enough to understand what the person is telling them so…it’s just another set of ears. It’s also often the family member so…maybe their most important communication partner. So just in terms of education it’s really nice to have that other person there because hearing loss is a family…it’s a communication issue. It’s not just a problem for that particular person. Um…so it’s nice to be able to educate the family member as well.*

Although nurses and pharmacists emphasize the importance of family members and care givers, they do not specifically discuss using Secure Messaging with them.

*Changing Communication to Support Co-Managed Care*

Several health care professionals report that Secure Messaging has improved communication with other health care professionals having a positive impact on co-managed care. For example, one health care provider explains that being able to copy a note into CPRS improves her communication with other VA health care providers who are also involved in the patient's care, noting that"it's actually a more efficient way to do communication within the medical center." Likewise, another health care provider reports that Secure Messaging has enabled better communication across specialty care teams and as a result these teams are more intimately connected with the patient’s care.

HCP07: *Many times we’ve been able to offer consults to specialty clinics or provide them with access to the peripheral team: the social worker, the nutritionist, or a pharmacist and they’ve begun developing a relationship with the team. So they really KNOW who the players are. It’s not just the delta team. It’s the TEAM that’s more intimately connected with their care.*

Other health care providers report that care coordination has improved as a result of patients sharing information via Secure Messaging because it improves awareness of care received in other systems and patient updates about non-VA care are more timely than with periodic face-to-face visits.

HCP01: *And…and the most important…I think there’s two things that have changed. Um…one is the care coordination. I had an email: ‘I went to the Emergency Room. I had chest pains.’ Well, you know, boy I’m going to make sure that person has an appointment. Um…I’m going to ask the clinic facilitator to get the records…* *and so…so…the patient has made me a better doctor…because, what if they didn’t let me know?*

HCP09: *It made the last visit a lot quicker, you know because we, in [state], our system’s…you always hear this about [state]…it’s different. We fee a lot of people out into the community for care. And a lot of people end up in [city]. And in [city] they end up being fee’d out into like the community there…So we get people who get care at lots of different places. So their ability to send us a little kind of update of what’s going on, for those who use it.*

Like health care providers, nurses also perceive that Secure Messaging has a positive impact on co-managed care because it facilitates communication and information sharing. As one nurse emphasizes, Secure Messaging can be an efficient way to manage medications for co-managed patients, with patients providing updates about medication changes or inquiring about proposed changes.

NUR03: *…I would say my guy who was co-managed is probably one of my best experiences…Oh it would just…it was a very efficient way to take care of it and that was part of the reason that our techno relationship I guess really kind of grew, because it was such an efficient way for us to manage. So he also was co-managed. He would get a prescription from his outside doc, or an adjustment even to one of his medicines on our profile, and he would send me a message that said, you know ‘Dr. Smith is recommending blah blah blah.’ I would quickly reply back ‘Can you send me the records?’ Within ten minutes I would have the records, and by the end of the day or the next morning we would have it all taken care of.*

Pharmacists also report that Secure Messaging has been helpful for improving medication management for co-managed patients, enabling patients to have a better handle on their care.

PHARM03: *…probably pretty helpful for them and for some it’s helped them coordinate results with other labs and possible side effects, and just have a better handle on their care.*

**Interrelated Effects of Secure Messaging**

Health care professional’s accounts provide evidence that the interrelated effects of improved access and communication enhance patient engagement, trust and satisfaction. Their accounts also reflect the perceived impact of these factors in improving relationships between patients and members of their health care team.

*Improved Patient Engagement*

Health care professional’s accounts provide evidence that Secure Messaging goes beyond the tactical accomplishment of tasks to educate, engage, and activate patients to become more involved in their health care. Health care providers report that the patients who are using Secure Messaging are the “most engaged” and that Secure Messaging puts the patient more in control.

HCP04: *Exactly! So I feel like this puts the PATIENT more in control of their health care too.*

Similarly, nurses perceive that one of the benefits of Secure Messaging is that patients can “take charge” by initiating the conversation, which she feels teaches and reinforces their sense of responsibility.

NUR05: *The benefits? Um…I…I LIKE that patients can send me their questions. You know, ‘this is what’s happening with my blood sugar…what do you think?’ You know, I like patients to take charge and have…start the conversation with me and then I can respond to them. So I think what Secure Messaging will do is teach…reinforce to patients…responsibility…but they’re going to have to learn this through…you know the dog and pony show that has to take place first.*

Pharmacists also report that Secure Messaging improves patient care in that the patient has more interactions with their health care team and can ask follow up questions after the visit, making them more involved in their care.

PHARM02: *I think it’s great. I think it’s exactly what we need, you know, like I said empowering the patient. Making them be in charge of their health care makes them more informative, you know, and stimulates trust and communication.*

PHARM03: *Improved patient care in that the patient has more interaction with their team members and better follow up for questions they may have thought of afterwards coming out of the office for the provider. It just seems like it makes them more involved in their care.*

Another pharmacist adds that greater patient involvement via Secure Messaging could lead to better outcomes.

PHARM04: *They like have a saying in their health care which is really great! Because we know from statistics that the patients who think they have an input in their health care, or they’re part of the decision making in their health care, those are the patients who will usually have a better outcome.*

*Enhanced Relationships and Patient Trust*

Health care professionals consistently report that use of Secure Messaging has enhanced the relationships that patients have with their health care team and enhance patient trust. Health care providers report that Secure Messaging has had a positive impact on patient/provider relationships and attribute this to several interrelated factors, including: the patient’s perception of greater and more direct access to their health care team; the patient’s perception of better responsiveness of the health care team to their needs leading to greater respect, trust, comfort, and appreciation; and increased frequency of communication. Health care providers comment that Secure Messaging enables them to know their patients better and to keep better track of ‘what’s going on with them’ because of the increased communication in between face-to-face visits, thereby improving their relationships.

HCP01: *I’m gonna underscore that sorta I get to know the patients better, which really allows…um…greater comfort…and greater ability to sort of co-manage. Ah because again when I say co-manage I mean me, and the patient, and the family, together, right?*

Health care providers perceive that the effect of Secure Messaging on improving the patient’s perception of accessibility has a positive impact on the patient/provider relationship.

HCP05: *…well I think it could have a positive impact [on the patient provider relationship] in that it adds another level of accessibility potentially. Um…patients feel like ‘I can instantly give the doctor my message or my feedback.’ You know…‘I thought of something from when I was there earlier that I didn’t remember to tell you and here’s what it was.’ So I think it offers them more accessibility and the feeling of more…more easily accessible communication, so I would see that as positive.*

HCP09: *So they feel like they have better ability to…it’s developed a closer relationship. I don’t want to say it like that but…you know they feel like they have more ability to contact and be in touch with me, and are more aware of what’s going on.*

Similarly, another health care provider reports that he thinks that Secure Messaging has enabled patients and providers to more comfortable with each other because communication is more direct. He comments that he thinks patients feel somewhat honored because they have more direct access, and that access is easier. He perceives that because of this, there is more respect, trust, and appreciation.

HCP08: *Hmmm…um…I think with Secure Messaging we have the opportunity to feel a little more comfortable with each other because it’s a little more direct. I think the patients feel somewhat honored because they have that more direct access and that access for them is much easier…So I think there’s more respect, there’s more trust, and there’s more appreciation.*

One health care provider emphasizes that Secure Messaging has strengthened her relationship with patients because it builds trust. She comments that Secure Messaging enables improved and more efficient communication and so is an additional resource for Veterans and their family members.

HCP07: *…I would say that it supports or strengthens the relationship: patient to provider. In the most simple sentence that I could provide I would say that it strengthens the relationship. It certainly builds trust.*

Similarly, another health care provider comments that Secure Messaging allows patients who are also receiving non-VA care to update him in between face-to-face visits. He thinks that because of this, patients feel that they have a better relationship with the VA and with their doctor.

HCP09: *So we get people who get care at lots of different places. So their ability to send us a little kind of update of what’s going on, for those who use it, um…it’s very good and I think it makes them feel like they have a better relationship with the VA and the doc.*

Using terms that are commonly used to describe synchronous communication or physical presence, another health care provider emphasizes the importance of the patient’s perception of being supported. He shares a story about a patient who sent Secure Messages on a daily basis after his hip replacement surgery. He expresses his reaction about receiving so many messages from the patient, but then describes the positive feedback that he received from the patient at his next visit. He notes that the patient expressed his appreciation that he was “listening” and “there*”* and his confidence that the health care provider was monitoring these messages and would advise him if needed. This anecdote illustrates the perceived positive impact of a virtual presence or connection on the patient/provider relationship and the influence of patient trust.

HCP03: *And with some people I think just having the option to do that or knowing that somebody’s going to listen and respond makes a difference. I think…you know the example I used when we taught that class still sticks in my mind a lot. That was a patient who sent me just message after message after message after message. And he had just had his hip replaced and he was sort of overly anxious and had some pain issues and swelling…and he was driving me nuts! And in the end, it stopped and his comment at our next visit was ‘You know it was just so nice to know you were there…and listening!’ From his perspective, it was ‘I don’t need to go in because he’ll tell me. He’s there. He knows…’ you know ‘…if it’s something serious and he’ll call me or make me come in.’*

Health care providers also comment about Secure Messaging as an electronic communication medium. One health care provider reports that although people think electronic communication is cold and unemotional, he thinks it is actually the opposite. He says that he thinks that Secure Messaging has improved his relationship with his patients. He emphasizes that once there is an established care relationship with face to face contact; Secure Messaging is a welcome form of contact for the patient and works well for the physician.

HCP06: *I think it’s improved it.…it and it’s...you know people think that it offers a further barrier or you know it’s like cold and unemotional in a technological way, but I kind of think it’s the opposite. Patients, once you’ve met them, and have established face to face contact and you know whatever established the kind of care relationship…after that a quick email I think is very welcome, a welcome form of contact for the patient. And you know it works pretty well for the doc too! I actually think it improves it.*

In concert with early guidelines for Secure Messaging, implementation of Secure Messaging at VA requires that health care providers have an existing relationship with a patient in order to utilize Secure Messaging communication. He emphasizes that an existing patient/provider relationship is important to avoid patient frustration with “a faceless person telling them what to do over email.”

HCP06: *I could see a scenario where somebody has…a patient is Secure Messaging with a provider they’ve NEVER met. You know however the system changes or morphs or is implemented already and I can see them being very frustrated with this faceless person telling them what to do over email… Once that relationship’s been established I think it’s a lot…I think it’s a good thing.*

Like health care providers, nurses also report that Secure Messaging has had a positive impact on their relationships with patients, attributing it to patient perceptions of more direct connectivity with their health care team, improved patient confidence that they are being heard, and improved responsiveness of the health care team to patient’s needs, leading to improved patient trust. Nurses also describe Secure Messaging as a more personable way of communicating which has a positive impact on their relationships. One nurse reports that Secure Messaging has improved relationships because patients value the fact that they can access their health care team more directly. She comments that patients do not like using the telephone system, and notes that when their telephone calls are routed through the centralized call center, patients often have to talk with a nurse other than their team nurse who doesn’t necessarily know them.

NUR09: *Well I think it’s improved our relationship with them…because they like the fact that they can now get through easier. They DON’T like the phone, and they don’t necessarily like the call center because here at the VA…here at [this VA site] they call into the call center and they don’t get to talk to their team nurse. They get to talk to a different RN that doesn’t necessarily know them…although they’re getting to know the RNs better as they call in more to the call center. But they like that direct contact with their team… yeah, I think they really like it a lot.*

Similarly another nurse perceives that Secure Messaging will have a positive impact on the relationship that patients have with their health care team because patients may feel more confident that they are being heard.

NUR02: *…patients may feel more confident in some of this; you know that he’s being heard, in some ways…And then he knows that something’s going to be acted on…it’s just a matter of when.*

Nurses report that over time Secure Messaging will strengthen the relationship that patients have with the health care team because it helps to develop trust. One nurse comments that although there is a requirement for response within 72 hours, most messages are responded to within the same day (many within four hours). She believes that because of this, patients trust that the team will respond to them and meet their needs.

NUR08: *Over time I think it will strengthen it…because they trust us. They know that if they send me a message I’m going to get back to them. And even though I believe at our facility we need to answer those in less than 72 hours I say nearly 100% of the time we’re responding to them the same day, you know probably in the same four hour block probably. So I think it’s going to strengthen it… But over time I think it’s going to strengthen it because they trust us and they know that we’re going to respond to them and help them you know in the best possible way that we can.*

She reiterates that Secure Messaging has helped the team’s relationship with their patients and provides an anecdote illustrating patient confidence in communication via Secure Messaging. She says that one of her regular patients reported via Secure Messaging that telephone calls to the clinic were not being answered.

NUR08: *Um…no. I like it. I think it’s helped our relationship with our patients. I did get one message early on and it was from a particular patient who you know he does rely on us quite heavily for his medications. And he sent me a Secure Message saying ‘You’re not answering your phones!’ Ha ha ha.*

Like their colleagues, pharmacists also report that Secure Messaging has improved relationships with patients. One pharmacist says that Secure Messaging is strengthening these relationships because there is more communication in comparison with periodic communication at nine to twelve month face-to-face visits that patients typically have with their primary care doctor. She says that with Secure Messaging they are building relationships by following up with the patient in between face-to-face visits.

PHARM10: *It’s actually strengthening it because there is more communication versus the nine month or twelve month follow ups that they’re having with their primary care doctor. We’re building…you know, relationships in between that and following up with the patient in between visits, which has been really helpful!*

One pharmacist reports that with Secure Messaging patients feel they have a closer relationship with their provider, and that they have input into their health care. He comments that patients like Secure Messaging and appear to be comfortable with it.

PHARM04: *…it looks like they’re very comfortable. They like it. They feel that they have a…you know a closer relationship with their provider. The provider’s taking time to answer their specific question. They have…one of the patients actually who…was it last? I think it was last week. You know he was just talking about his calcium. He was on some medication I forgot which might decrease his calcium and um…he was talking about ‘If I go over the counter what should I buy? What do I need to do?’ It’s like…it is very good. They feel like they have a close relationship with the providers and they have an input.*

While Secure Messaging guidelines specify that Secure Messaging should be used when there is an existing relationship with patients, a pharmacist may be assigned a message from another member of the health care. At times this can lead to a situation in which the pharmacist does not necessarily have an existing in-person relationship with a patient, especially since pharmacists tend to serve on multiple triage teams throughout the facility. One pharmacist notes that there are some patients that he interacts with via Secure Messaging that he has not yet met in person. When this occurs, he begins his response by introducing himself to the patient. He comments that although there’s not necessarily a face-to-face connection with patients, he feels that he has made more of an impact using Secure Messaging than he would be able to in a traditional clinic because he is able to assist more patients.

PHARM06: *Well I think that I’ve gotten to know some patients that I’ve never met and had a one on one pharmacy patient appointment with because the message may be assigned to me because it’s something that I can help with. I respond to them and I always identify myself as…’my name is […] and I’m the pharmacist working on the team with your doctor and the nurses. I can take care of this issue for you,’ and then I resolve it. Um…so I don’t know that there’s…there’s not necessarily that connection of face to face, shaking hands with the patient and…then being able to realize the impact that you’re having. But I think that I have been able to interact with more patients than I would necessarily just in the regular primary care clinic. And I think that in a lot of ways what I’m doing on Secure Messaging for the patient is much different than what I would be doing in the primary care clinic. Because of my primary care pharmacy clinic it would be more you know making medication changes, which we don’t really do over Secure Messaging because it’s not being used as a case management tool yet.*

*Increased Patient Satisfaction*

Health care professionals consistently report that use of Secure Messaging improves patient satisfaction. Health care providers note that patients are very satisfied with Secure Messaging.

HCP09: *…they like it! …Once they use it, they like it!*

HCP03: *The patients love it!*

One health care provider attributes this in part to the health care team’s greater knowledge of the patient made possible through use of Secure Messaging.

HCP01: *…and knowing that greater knowledge of the patient leads to greater trends in satisfaction for the patient. I know that they really like it!*

While some health care providers report that age doesn't matter, others comment that younger patients especially prefer to communicate electronically rather than call by telephone.

HCP01: *Um so, I have a few younger guys that are, you know, a little healthier; don’t really want to come in…and so I really talk about, you know we can communicate and you don’t have to use the phone, you know and they LOVE not having to use the phone.*

Nurses also report that Secure Messaging increases patient satisfaction and that those who are using it are more engaged in their health. One nurse describes it as an extra tool which can improve efficiency, improve quality of care, and increase patient’s satisfaction with the whole process of health care delivery.

NUR03: *ALL the experiences that I’ve had have been really good because they’re people who are engaged in their health, and using this extra tool. It not only makes their…satisfaction with the whole process better, it improves the efficiency and I think quality of their care.*

Nurses perceive that Secure Messaging is a good way to maintain customer satisfaction.

NUR10: *Um…the patients really like it too. I mean they like being able to CONNECT.*

NUR09: *The patients that do a lot of, you know they’re computer savvy, they do a lot of emailing anyway…they REALLY really like it!...especially the ones that live out of town and its difficult for them to us on the phone line. They really like being able to shoot the doctor a message…So for the most part I think they’ve been happy. And like I said the doctor that I work for is very quick so she sends them back a message right away.*

Like health care providers, nurse also comment about the benefits of Secure Messaging for younger patients because of their comfort with electronic communication and how it fits into their lifestyle.

NUR09: *Um…I think it…I think it adds better customer service and better patient satisfaction and especially with the younger guys. You know a lot of the older ones don’t even have computers or know how to turn one on. But the younger guys that are used to texting and using this form of communication…email, you know that type of thing, they…they just really LIKE it! And so I think it’s just…it’s impacting our whole, you know, form of…just ADDING another form of communication…in a form that they really want and that they like. And it just adds to the patient’s satisfaction all around.*

NUR06: *And the vets that use it really seem to like it. It’s definitely conducive to their lifestyle, most of them were younger.*

One nurse reports that when she started using Secure Messaging routinely with patients in her clinic it was the patients who started to drive adoption efforts.

NUR01: *And from there once the patients starting to really talk about how much they loved this opportunity…um…then it made sense. Um, you know those were the patients that we targeted. They then started telling their friends about it. They started telling their providers how much they loved it. And then, you know, the patients, as I’ve said a thousand times, the patients started to drive the bus...It was no longer that the providers, or the clinical team members, were in charge of this, It was really the patient saying 'Oh, it’s available? I want it.' And they started using it.*

Another nurse shares a Secure Message that she had just received in which the patient has sent a message to the health care provider to express his thanks.

NUR08: *I was doing my Secure Messaging when I realized I had to call you. Okay here it is: ‘Dr. Smith. Thanks for your time and sincere interest. This beats the hell out of jumping through the urgent care hoops! Most sincerely yours, Joe Veteran.’ Now in actual fact we have to respond to that and we really don’t encourage them to do that but I probably get two to three of those a week, a similar kind of message. If I get more than one from the same person I’ll say…I’ll just say ‘Thank you for your kind words, but please try and restrict Secure Messaging to medical questions because we are required by the system to respond to everything.’*

Pharmacists report that patients are “very excited” about Secure Messaging.

PHARM04: *I’m the surrogate for some of the providers…and you know I could tell that the patients who are emailing us all the time, Secure Messaging us all the time…they’re very excited about it!*

When I ask her to further describe her experience with patient’s reactions to Secure Messaging, she reports that patients love it and that some patients are already frequent users of the system. She comments that in a recent patient orientation session, patients were very excited to hear about it and were able to register for an account and complete the authentication process at the session.

PHARM04: *…you know we have frequent flyers already. I know that I can expect who’s going to send me an email now or next week. They love it! The patients who use it love it! And you know yesterday we had our new patient orientation at one of the sites and we…it was a very small group this time. Last…two weeks ago it was like 37 patients. This time was 12 patients and 9 of them actually got so excited and wanted to create an account…wanted to be authenticated and we went through the whole process…9 out of 12! It was really very good.*

Similarly another pharmacist reports that patient satisfaction is very high and pharmacists appear to be comfortable using the system.

PHARM06: *I would say it’s going really well. I think the most important thing is: what is the patient’s perspective and what is the patient experience with it? …I think overall there’s very high patient satisfaction and I think that the…as far as pharmacists go with being trained…they’re comfortable enough with it.*

Another pharmacist distinguishes between his experience at the CBOC where he previously worked and his experience at the larger main VA facility where he now works. He notes that at the CBOC he had more direct contact with the patients who were using Secure Messaging and says that patients would come by when at the clinic and say thank you. At the main VA facility he has not received direct feedback from patients but reports that the nurses have commented that patients are very satisfied with it.

PHARM06: *So when I had been at [the other site] the feedback…I think just because of the climate that was at that facility, it was a lot more of like a…it almost seemed like a family practice there…we would see the patients a lot more so that you know the patients were a lot more um…it was a lot more often that the patient would come by and say ‘Hey thanks for responding to my message. I just got my prescription’ or ‘Thanks for responding to my message. Now I understand what I’m supposed to do.’ Here at [this site] I think because we’re a little bit more of an urban setting, we don’t necessarily have that contact with patients. So I know that the patients are satisfied by the nurses you know speaking with them and I think that they’ve done some surveys within the My HealtheVet or within the VISN for our VISN coordinators to actually speak with patients with end user surveys. But I…I haven’t gotten a whole lot of one on one direct feedback from patients. I’ve just been told that the patients are very satisfied.*

He perceives that patient satisfaction results from patients knowing what to expect in terms of a timely response, and then getting what they expect.

PHARM06: *So I think because the Secure Messaging end user agreements are so straight forward: that ‘this is not for emergencies. You will get a response within three business days. Wait for a response to come from the team.’ I think that patients think that…from my perspective the satisfaction is that they know what to expect and they get what’s expected, if not a little bit more as far as the response from the health care team.*

He adds that the type of assistance that he is providing to patients with Secure Messaging is different and because he is able to respond to whatever the patient needs he feels that Secure Messaging is a positive thing for patients.

PHARM06: *So we’re…the patient has a request. We’re responding to it and almost always taking care of whatever they’re asking for, and so I would think it would be a very positive thing for every patient…at least a positive response from them.*

Another pharmacist perceives that Secure Messaging provides a different avenue of communication and notes that for this generation of Veterans, the use of computers is an integral part of their daily lives. He says that often while Veterans often have difficulty contacting the facility via telephone, Secure Messaging provides a sense that their issue is being addressed. He comments that it is well received and that providers and patients would like to see even more functionality and options for being able to connect.

PHARM09: *Um…if gives us the different avenue of communication I think as…as this generation and I think currently that the use of computers is as being an integral part of their daily lives. And so having that available really I think gives them another opportunity. And often times when Veterans are having difficulty contacting the facility and they have to wait for such a long period of time and we don’t have the time to do so and their issues can’t be addressed, at least this gives them some sense that it’s somewhere in the computer system or somewhere in the queue to get addressed. I feel like that it’s a great resource or a great additional kind of avenue for Veterans to be able to…to utilize. So...And I think it’s really well received from what everyone says. I think a lot of the providers and a lot of the patients who are interacting with them would actually like to see a…would like to have more functionality and more options for them to be able to connect with pharmacists, providers, nurses and staff.*

**Summary**

Health care professionals report several consequences as a result of Secure Messaging use. They perceive that Secure Messaging improves patient access to the health care team and health care services, and makes it easier for health care team members to respond directly to patients. Secure Messaging enables better connectivity between patients and members of their health care team and avoids some of the challenges encountered with telephone calls, such as phone tag. Patient perceptions about access are positively influenced, increasing patient’s confidence that they can easily reach their health care provider when needed.

Health care professionals perceive that Secure Messaging changes both communication and the patterns of communication. Communication is more direct and focused, in contrast to telephone communication. Health care professionals report differences in the patterns of communication with Secure Messaging as a result of asynchronicity, including more frequent communication with patients in between periodic in-person visits, and a lowering of the threshold at which patients will initiate communication with their health care team. Asynchronicity is perceived as beneficial because it enables patients and health care professionals to send and respond to messages when it is convenient for them. This enables patients to communicate in their own time and be thoughtful about their needs. For staff, asynchronicity enables them to respond to patient requests when they have time within their workflow and to give patient requests more focused attention. Health care professionals report that being able to save the interaction as a progress note in the VA EHR ensures needed documentation and also allows them to capture the patient’s description in their own words.

With Secure Messaging, health care professionals report that more frequent communication enables them to keep track of what is going on with their patients in between face to face visits, and as a result they know their patients better. Exchange of information prior to the clinical visit also enhances the quality of the visit. As one provider describes, accomplishing administrative work in advance of the visit enables the health care provider to focus on the patient’s agenda at the visit. Another phenomenon that health care professionals describe is the impact of Secure Messaging on the threshold of communication for patients, facilitating improved communication with patients. Health care professional’s accounts provide evidence that the interrelated effects of these changes leads to improved relationships between patients and members of the health care team. Secure Messaging is perceived to increase patient engagement, trust, and satisfaction.

The growing body of literature about PHRs and Secure Messaging is beginning to demonstrate that to be most effective for patients and their health care providers, PHRs should be combined with web-based messaging tools to support information sharing and bidirectional communication. Several studies have begun to emphasize the important role of communication with patients as they make use of PHRs. Green et al. (2008) conducted a randomized study of patients who monitored their hypertension at home, demonstrating that improvement in patient health outcomes was significantly higher when access to a PHR portal was supplemented by communication and feedback from their health care provider via secure web-based messaging. Similarly, Nijland et al. (2011) examined the factors that influenced use of DiabetesCoach; a web-based application with integrating patient-nurse messaging for supporting self care of patients with Type 2 diabetes. The authors concluded that patients felt more closely monitored by their nurse and encouraged to play a more active role in self-managing their disease, however they also emphasized that it was the continuous personal feedback enabled by electronic communication within the system that particularly appealed to patients. Kahn and colleagues (Kahn et al., 2010) reported high patient satisfaction with a PHR endorsed by their clinicians that included both data populated from the EHR and the ability to self enter data. While patients found access to lab test results, medication lists, and medical condition lists useful, they also expressed concerns about the accuracy of their health information and the desire for tools to address these concerns. Study conclusions highlighted the need to provide communication tools to enable patients to provide feedback and request amendments for information that was inaccurate or incomplete. Likewise, some physicians assert that PHRs with integrated communication tools can dramatically improve patient-physician communication (Detmer, Bloomrosen, Raymond, & Tang, 2008). As Terry notes (2008), “a PHR that doesn’t connect to your doctor is like an ATM without any money in it.” Systems that provide patients with access to their lab test results, for example, should also anticipate the need for additional communication by providing patients with the ability to ask questions about their results to “close the loop.” These findings have important implications for the design and use of PHRs and PHR systems.

The next chapter will present a discussion of study findings including a comparison of underutilized My Health*e*Vet features with the implementation and use of Secure Messaging, identifying key factors that influence the adoption and use of the technology by health care professionals. The chapter will conclude with implications, study limitations, and directions for further research.