



SECURE MESSAGING MINI-MANUAL

I - Interoperability

Often you need to refer patients or consultation notes to other providers or third parties located at different locations. Up until now, your clinic has performed these tasks by providing the patient with this documentation or by faxing/ mailing those clinical documents directly to the intended healthcare recipient. And of course, you have received clinical documentation in the same manner. Although Praxis and other EHRs can easily incorporate these documents into their systems, the arriving information cannot be queried, flowcharted, or used in any other way other than simply to be viewed in the chart as inserted notes.

As an example, Datum allows for the automatic uptake of discrete data such as labs into your note while charting, but cannot import such data when found within scanned or faxed documents received from the other clinics.

A more serious issue is when the patient is referred to you with a list of current medications, medical problems, allergies and vaccines, which must then be re-entered by your staff anew causing unnecessary work and potential errors in data entry.

Another problem is that of knowing whether or not your outgoing information has arrived to the intended recipient or vice versa, and this can lead to wasted time spent on telephone calls to obtain such confirmations.

On a different note, public health agencies who attempt to perform population studies with the aim of improving the quality of medicine and reducing its costs are hampered by the same discrete data problems, requiring them to re-enter chart information that is readily available within their incoming documentation.

All of these issues can be resolved easily by "Interoperability."

Interoperability is the ability of electronic systems, such as EHRs, to communicate clinical data with each other transparently so that the arriving communication is able to be analyzed in a way that allows it to perform the above-mentioned tasks automatically. This involves keeping a strict set of communication and formatting protocols so that the data maintains its discrete status upon arrival to its intended destination. These protocols have been approved and are being enforced by CMS. This also helps promote market competition, as larger EHR systems and hospitals cannot hoard providers to their EHR on the basis that only clinics using their EHRs can easily communicate with each other, but instead with these new protocols, all EHRs can now communicate easily with one another. This is, of course, great news

for Praxis and for Praxis clients as it will allow you and all our clients to continue using Praxis in the future even if your healthcare system or hospital demands a different EHR. Praxis and the other EHRs will be able to peacefully co-exist and automatically exchange medical records transparently.

Below we discuss the two parts required for Interoperability to take place:

1. The Patient Summary, defined as the discrete data that you can currently transmit and receive to and from other EHRs.
2. Secure Email, otherwise known as Direct Messaging, which is the method you will use to transmit and receive clinical information to and from a provider located in a different clinic.

The protocol is called the "Consolidated Document Architecture" or C-CDA is defined by the HL7 Healthcare Standards Organization and enforced by CMS for this purpose.

II -Praxis and Interoperability

The real beauty of Praxis is that it can automate almost everything you need via its artificial intelligence Concept Processor, provided you learn how.

And by "everything" we not only mean the charting process itself, but also many other aspects of your practice including your communication with patients and with other providers.

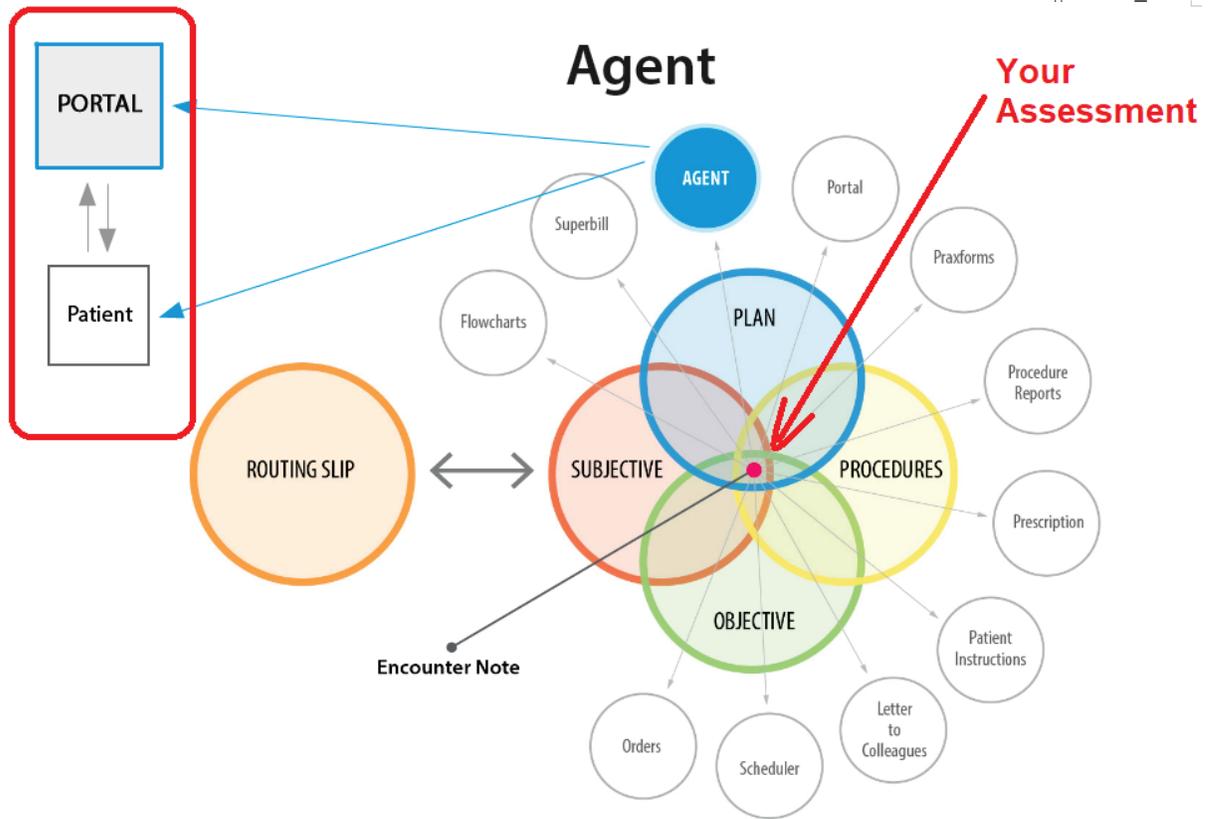


Figure 1. Your assessment not only controls what you chart automatically, but also what you wish to do, even before you realize you wish to do it

If you still have not learned how to use the Concept Processor to your maximum advantage, this may be a good time to brush up. Please review the demos on our training page.

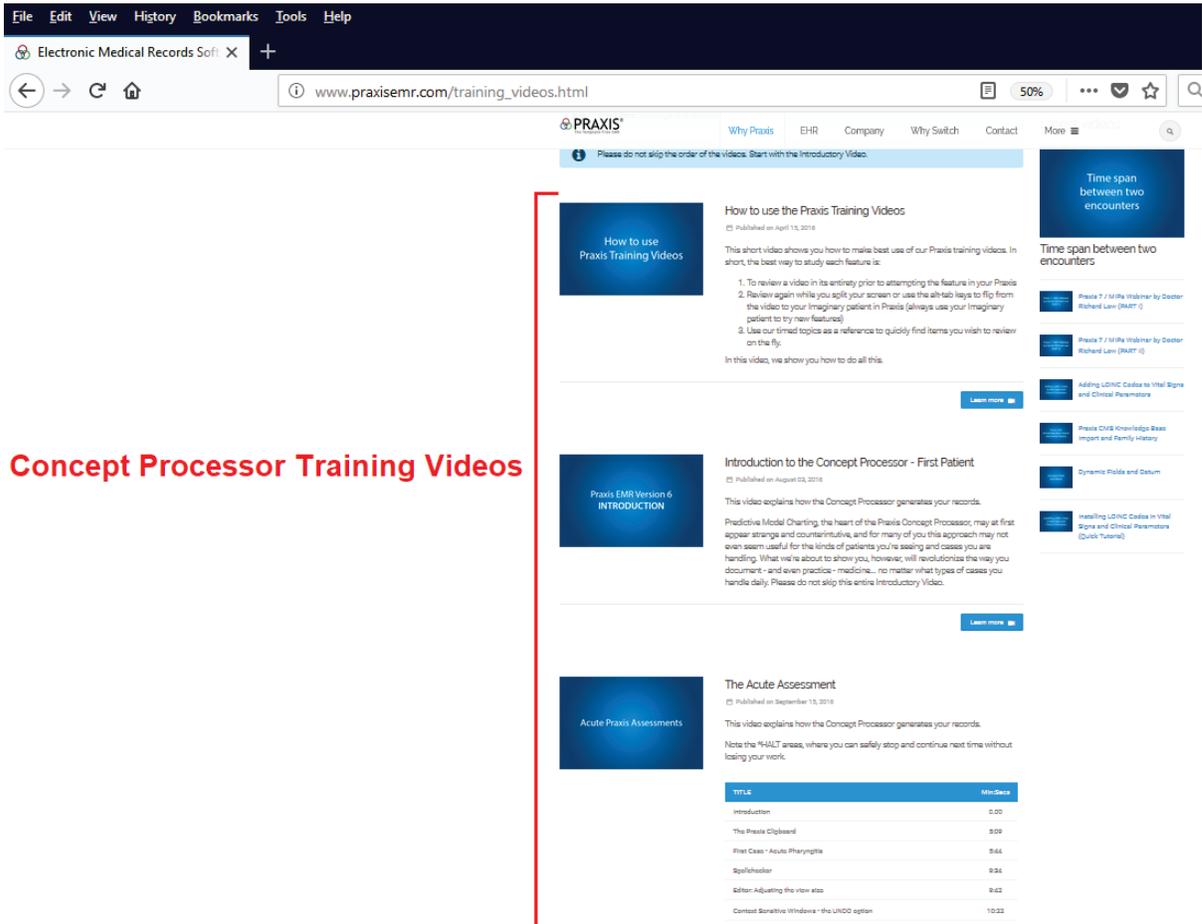


Figure 2. Concept Processor Training Videos at <http://www.praxisemr.com/videos>

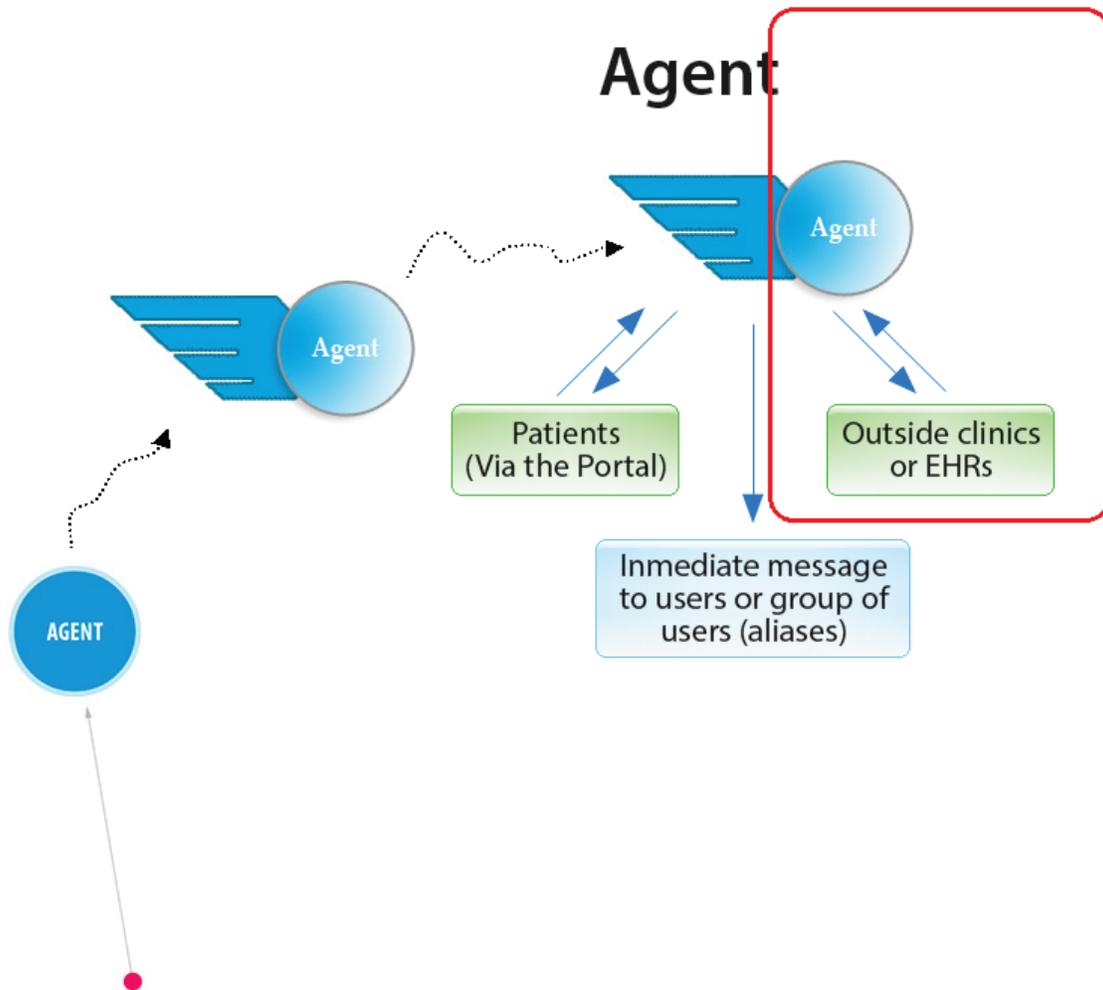


Figure 3. How agents communicate with the world.

Agents are the heart of intra office communication. You probably also know by now how agents can be used to communicate with your patients automatically. Now comes the third stage in communication with the outside world. The principle behind the agents and behind the Concept Processor remains the same. You only have to teach it once and it does it forever. So now you can use this knowledge to leverage communications with other clinics far easier.

Please keep in mind this is our first version

The whole Praxis communication interface is in active development. In this version,

we focused on the need for you to connect with other EHRs so that you can comply for the MACRA/MIPS regulations. However, in Praxis this technology will become even more powerful so that soon you will not even have to think about connecting to third parties and transmit all your documentation via Secure Email.

First, we will explain how Praxis works NOW. And then we will show you where we are taking this technology in the near future. We are very excited!

III - The Patient Summary

As mentioned earlier, one of the reasons for interoperability is so that you can both send and receive information that can then populate the other clinical information system in a discrete manner. So, when you receive such a message from another clinic, and it contains the current medications the patient is taking, after a quick review of the incoming medication list, known as "Reconciliation" performed by you and your assistant in a few seconds, the incoming current medications automatically get incorporated in the patient's record as though it had been manually entered anew.

The Patient Summary is included within your Agent Related Message

For this to happen there has to be an agreed-upon protocol that all systems can share, a certified standard. This standard has been termed the "Patient Summary". It is an HL7 protocol written within an xml file and enforced by CMS, called the "Consolidated Clinical Document Architecture or C-CDA. This document includes within it two characteristics: one that may be understood by the computer and used to process the enclosed clinical information and another which presents it in a viewable format that you see below.

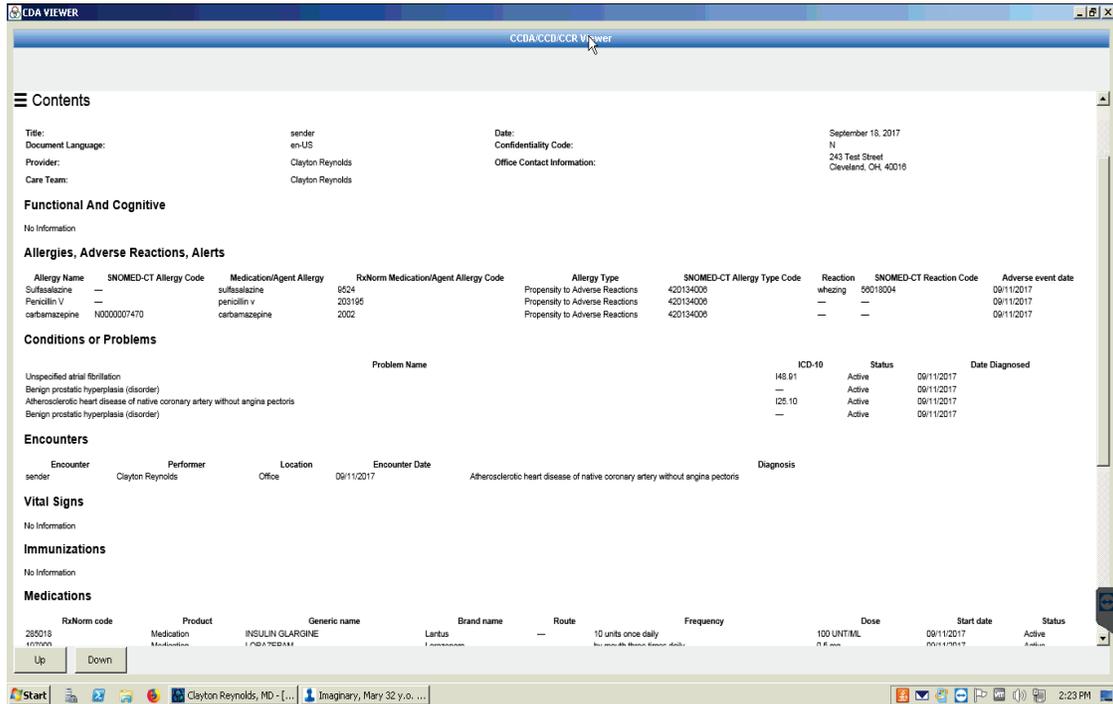


Figure 4. C-CDA Patient Summary: The elements of this document are totally codified. Any certified EHR can send and incorporate this kind of information in a way that can be processed by the computers and incorporated with discrete data into its different fields, such as Medications and Allergies. Selecting "Contents" (upper left side of the image) allows you to focus on any part of the data, something quite useful to view long incoming documents.

Currently, Praxis is able to receive any kind of Patient Summary. Praxis is able to transmit parts of the Patient Record as discussed below.

With a bit of imagination, you may send any type of clinical information as we will show.

Currently, Praxis can receive a Patient Summary with any kind of properly coded information and it can send, in discrete data format, the following information as the Patient Summary above:

- Patient name
- Sex
- Date of birth
- Race
- Ethnicity
- Preferred language
- Smoking status
- Problems
- Medications
- Medication Allergies
- Laboratory test(s)
- Laboratory value(s)/result(s)
- Vital signs – height, weight, blood pressure, BMI
- Care plan field(s), including goals and instructions
- Procedures
- Care team member(s)

Dynamic Fields

A given set of Dynamic Fields have been approved by CMS to be included automatically into the Social History as discrete data. You probably know of the Smoking History of the Patient. You may also add other discrete data values such as the Industry and Occupation.

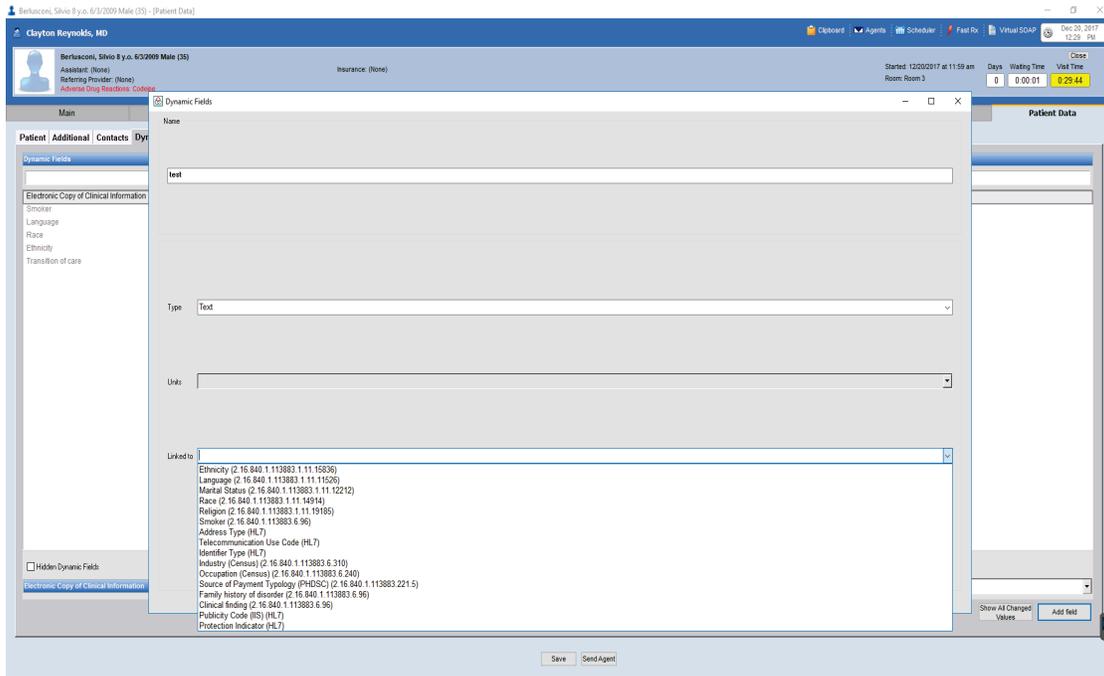
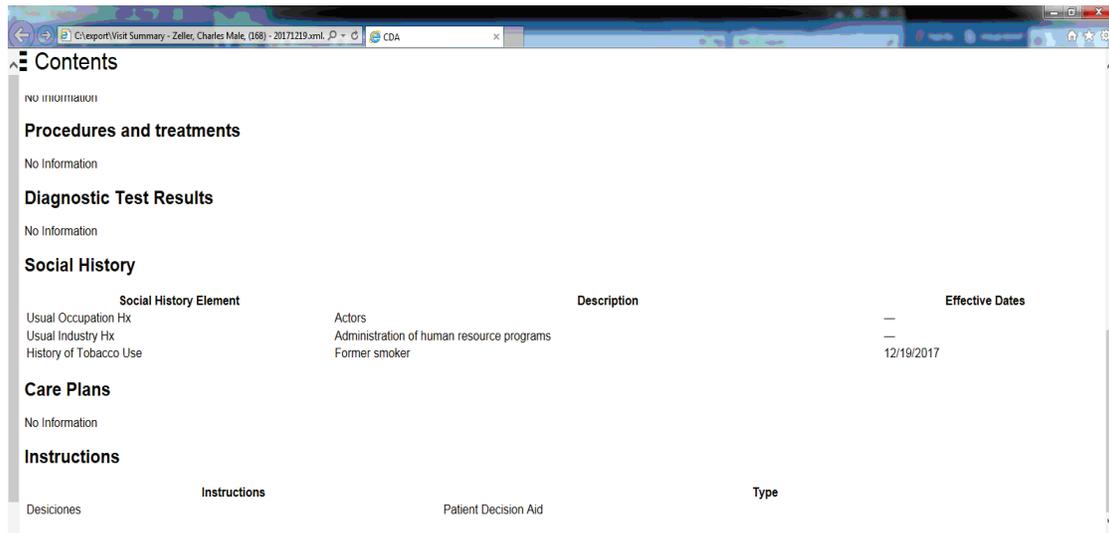


Figure 5. Official CMS codes of Smoking, Industry, and Occupation are the only codes that may be included in the Social History. They are taken from the Dynamic Field "Linked to" Official Codes Set.



Contents

NO INFORMATION

Procedures and treatments
No Information

Diagnostic Test Results
No Information

Social History

Social History Element	Actors	Description	Effective Dates
Usual Occupation Hx			—
Usual Industry Hx		Administration of human resource programs	—
History of Tobacco Use	Former smoker		12/19/2017

Care Plans
No Information

Instructions

Instructions	Type
Decisiones	Patient Decision Aid

Figure 6. When Occupation, Industry or Smoking are added to the patient record, linked to the Dynamic Fields listed above, the information will be added to the Patient Summary automatically within the Social History field.

These entries into the Patient Record, other than the Smoking history, are optional on your part, so they need not be sent on the Patient Summary.

In the Discussion/Management and Plan Section of the Patient summary, things get more interesting. Please see "Markups" below.

This is what is currently required by CMS, but we are improving clinical information that you will be able to send in the near future. The improvements will be released via Praxis updates.

IV - How to Transmit and Receive Clinical Information via Secure Email.

As you will see, the Praxis Agents may be sent, not only to patients via the Patient Portal, but also to other EHRs. As in the case of the Patient Portal, an automatic conversion takes place from agent to secure email and vice versa.

A Secure Email, like its regular email counterpart can be sent to any other "Secure" email address over the internet following the standard Secure Email Protocol. What makes these emails different from the regular kind is that they are, in fact, secure. This security implies three additional properties not found in regular emails:

1. Secure emails are encrypted, meaning that no one may be able to read any clinical message along the way to its final destination, which is usually the EHR of the receiving provider.
2. The included documents of the email may not be changed in any way by anyone, including by the recipient, without leaving a telltale trace at the recipient's end stating the document was tampered with. Thus, no one can allege that a message you sent was received differently from your original, down to the most minute changes, additions, or omissions. The document received is certified to be identical to the one you sent by something called "Hash".
3. You are immediately informed of the correct reception by the system of the recipient, within two to five minutes after you have sent it, no matter where in the world that other system is located.

And, of course, the same can be said upon your reception of a clinical message from any external site. In fact, messages that are not proven to be legitimate before will never get to you.

V - How to use the Secure Email Feature

First Step: Register your Secure Email Address

The first step has to do with the last comment made above. How do you know that whoever is sending you a clinical message is actually the provider or the bona-fide healthcare organization that purports to have sent it?

This is done through an identity-proofing process that, for Praxis users, may be carried out via PayPal or through your friendly Notary Public.

This is fully explained in this document:

http://www.praxisemr.com/direct_messaging.html

As explained in this previous document Praxis is currently using "EMR Direct" to interface you to the world (<http://www.emrdirect.com>). If Praxis is the telephone, then EMR Direct can be thought of as the telephone company.

Also, as discussed in the above document, your Authorized Clinic Representative (who will probably be your office manager) once empowered by EMR Direct, will authorize each provider in your clinic by creating an email address of his/her choice.

The email address must follow the standard email address requirements (Underscore, Hyphen, periods are allowed. Non-case sensitive).

The full email address must include in the dominion the terms:

".praxisemr.phimailbox.com"

Example:

John.Smith_MD@ACMEclinic.[praxisemr.phimailbox.com](http://www.praxisemr.com)

This information is passed by your Authorized Clinic Representative, and we will set this email in the EMR direct system, passing you the corresponding password for each user.

Setting your Secure Email Address in Praxis

CURRENTLY OUR SUPPORT TEAM WILL BE ASSISTING OUR CLIENTS WITH THIS ACTUAL INSTALLATION OF THE PASSWORD. So, this is for future use only. You need not be concerned about how to actually set this up in your computer, but you do need to get your email account from EMR Direct as explained in the video

Please view this short video on how to do it in your Praxis:

Short video: [Setting Up Your Secure Email Address](#)

Sending a Secure Email

You use agents to send your secure emails. This can be accomplished both via the SOAP-related Agents, will all the power that it implies, as well as with free agents, which can be set up in Agent forms if you wish.

Currently only Providers may send secure messages via agents unless non-providers have secured a personal secure email address, which will not be required in the near future. Please view the video below that describes the whole process:

Video: [Sending Secure Emails and Contact Data](#)

Published: 12/19/17 (Time: 22:06 minutes)

This video explains how to use Contact Data to send messages and how to then send these messages once you have been registered by having set up your Secure EMail address in Praxis.

TITLE	Min: Secs
Part I - Contact Data: Creation	0:00
Part I - Contact Data: Linking to patient's record	4:45
Part II - Creating a SOAP Related Message Agent	6:41
Part II - Allergy and Medication Reconciliation prior to transmission	12:24

Part II - Transmission of a Free Standing Agent - Forms	18:31
Part IV - Certification of Reception	21:14

Receiving Secure Emails - Medication, Allergy, and Problem List Reconciliation

Your secure email address may be provided to any other clinic or physician which will allow you receive patient records via agents. Once these documents arrive to your clinic, they become incoming agents, no different than any others you may receive from your assistants, from Scanaway or from the patient Portal. They line in your inbox as agents unread.

As an attachment to these incoming documents, you will see the visual portion of the Patient Summary - C-CDA

In addition, you or your assistants may now reconcile allergies and medications, whereas you may also reconcile the problem list automatically, without having to perform data entry. This is particularly useful when a new patient comes to your clinic for the first time, or even more so when you come to Praxis for the first time from a different EHR. As all certified EHRs must be able to export all their Patient Summaries automatically on request. This means that as the patients return to your clinic, their medications can be easily incorporated by your assistant or by you you with a click of the mouse.

Short Video on [Reception of Direct Messages and Reconciliation](#)

5:39 minutes (Published 12/19/17)

TITLE	Min: Secs
Part I - Reception of Direct Messages	0:00
Part II - Allergy, Medication and Problem List Reconciliation	2:52

Markups

This section is optional on your part, although quite useful. This information need NOT be included with the Patient Summary. It is up to you.

Markups are a very exciting new feature of Praxis. In a way, they are the opposite of Datum. If Datum embeds discrete data into free text, then markups encapsulate free text into discrete data fields that may then be used for querying, practice advisories and Interoperability. At the moment, only this last feature is usable. Soon, you will be able to do all three.

As you know, Praxis works with a very old concept called "free text" (it is as old as the invention of writing!), where you can literally enter whatever you wish anywhere in the record. However, the world is demanding discrete data, which is data that is constrained to certain fields pre-created so that computers can understand what to do with your information, and there has to be a precise way to store your free text within these pre-set fields so that when this specific data is sought it can be readily retrieved by other EHRs. Markups accomplish this with ease, by leveraging the power of the Concept Processor to make this transition automatic. Otherwise, you would have been forced to do special data entry for each patient you need to transfer or refer to another clinician, a very tedious job indeed!

How does Markups Work?

Please see short video:

[Markups and MIPS](#)

You may create any markup fields you wish.

Markups may be used with any editor of the SOAP Note, not just the Management area. In fact, Markups will combine the similar text from different areas to make up

the final combined text.

As you have seen in the above video, Praxis comes with a few Markups already created, simply as examples:

- Reason for the visit
- Smoking Cessation
- Weight Loss
- Preventive Health
- Patient Decision Aids
- Future Scheduled Tests
- Future Appointments

Currently, your markups may be lined to SNOMED codes, which are NOT necessary, as all Markups will end up in the section called "Care Plan" if you so choose (please see the demo video above). Later, we will include LOINC codes as well. None of that is crucial at the moment, although it will be in the future.

So, the indicated Markups are linked to the Patient Summary, meaning that if you were to use any of these within your editor (any part of the editor), the HIGHLIGHTED (activation) information therein, no matter how lengthy, will be transferred to the Patient Summary (in the Care Plan Section). The beauty of this is that it gives you the opportunity to really explain the case using your own words, add a markup, and your text will be transmitted within the appropriate field of the Markup you have selected. Not only that, but the next time you see a different patient with the same issues, then your assessment will not only bring forth the text as usual, but also the corresponding markups, so the information will be transmitted for that patient as well. Finally, it is great for summaries because you can select into the markup essential clinical text automatically from the history, the objective findings, the Discussion and Plan that then are automatically combined to make up a single concept (i.e. patient summary) that is entered into the Patient Summary area.

Markups coupled with the Concept Processor will allow you to interoperate with the world and yet still maintain your writing the way you wish to do them without much effort on your part. You do it once, and Praxis does it forever on your behalf.

Conclusion

The Direct Communication Coupled with Agents, Datum, Markups and the Concept Processor will allow you total freedom of expression at extraordinary speed with great degree of accuracy and yet you will be able to communicate with the rest of the world, using different EHRs. Of course, this also means you need to learn to use this technology. In fact, the more you know about Praxis, the less work you have to do and the less time you waste. We submit that learning how the Concept Processor can help you perform all these tasks is much easier than having to repeat yourself over and over again for each patient, and intellectually it is a more stimulating task.

We also believe that as interoperability improves—and it will—Praxis will begin to be used within clinical organizations, as clinicians like you will demand its use within larger setups. Doctors should use systems that you like, and then the systems should be able to "talk with one another" automatically. This is what this Direct Project is all about!

For more information on Praxis 7 features, particularly in regards to MIPS, please visit our [Praxis 7/MIPS Educational Resources](#).