

LYN SCHULTES: OK. Hello, everyone. Welcome and thank you for attending the VA Mobile Discussion Series. My name is Lyn Schultes, and I'm going to run through just a few brief technical reminders before we begin today's discussion about VisualDx.

Please note that this is a re-recording of a previous live webinar. Your phone lines are muted today. We will be taking questions through the chat feature found at the right-hand side of your screen. If you are experiencing any technical difficulties, let us know through that chat feature.

Today, we welcome Donna Reinhart. She is the vice president of sales for VisualDx. Please note that several other members of the VisualDx and VA team are also on hand to answer questions via the chat feature. If you have any questions, please submit via chat, and we will stop the presentation intermittently to answer those questions.

If we don't get to any questions, we will send out an email following this webinar with any relevant answers. To download today's presentation, please download the file at the bottom right of your screen found underneath the chat feature.

And with that, I will turn this over to our presenter. Donna, over to you.

DONNA REINHART: Thank you, Lyn. Today during our time together, we're going to look at some background information, first, about VisualDx. And then, we're going to take a look at the actual product, which is available to all clinicians within the VA network via internet access. So first, let's think, why is VisualDx needed? What is the need that the product meets?

Last fall, the Institute of Medicine published a report around diagnostic error. And they looked at many different facets of diagnostic error. And one of their summary statements in there, just to show the magnitude of the challenge, is that nearly every person will experience a diagnostic error in their lifetime. And if we think about that, all of us on this phone line today and our family and our friends and the family and friends of those folks, each one of us could potentially experience a diagnostic error.

Now, it's fair to say that most of us will go on and recover from those errors or really not have a challenge or seek a second opinion. But that's not true in all cases. And in the final pages of their report, the authors from the Institute of Medicine had several goals that they laid out to help resolve the challenge of diagnostic error.

And goal number three states to ensure that health information technologies support patient and health care professionals in the diagnostic process. So when we take a look at VisualDx, we should be focusing on this is a way to help support the diagnostic process.

So let's take a look at this infographic. It's no wonder that there are errors that are made. When we look at a typical primary care physician's day, they're constantly switching gears. They have a long line of patients that come in every day. Usually, every 15 minutes they're seeing somebody new.

And every so often, they anchor in on a diagnosis. They listen to the initial symptoms. And they fail to adjust and may miss something critical.

Another challenge that could result in a diagnostic error is premature closure, where the clinician goes with the first diagnosis to come to mind. And they don't consider other possibilities that could be in the differential. And sometimes even because they're so rushed and there's just so much going on that they don't always take a detailed patient history.

VisualDx and other tools in this referential category are changing the paradigm of the way medicine is practiced. In the 20th century, physicians had to memorize everything. They made unaided decisions. I still recall many years ago seeing physicians and residents and students with pockets full of manuals in their white coat. They learned on rounds. And most importantly, they never let the patient know that they didn't know.

But things have changed. Things are much more process-oriented now. Physicians make assisted decisions every day using VisualDx and other electronic resources. These tools are readily accessible on smartphones and iPads that are in the pockets of their white coat instead of all of those manuals.

They acquire information. It's known that you can't memorize everything.

And physicians talk to their patient. They engage with their patient to discuss the decisions that have to be made.

So what is VisualDx all about? VisualDx is the go-to tool for fast, accurate differential diagnosis, to evaluate possibilities for the diagnosis for your patient, to compare the variations of disease presentation, and to improve accuracy at the point of care. So VisualDx helps tackle challenging diagnoses by building a custom differential across all of general medicine in seconds. You can quickly compare variations of disease to solve complex presentations.

Many people tell us it's like having the fastest second opinion available. It's right there at the point of care. You can pull it up on your device and have an answer in seconds. And there are over 40,000 images in VisualDx, which help solve challenging patient presentations because it's known that rashes and skin lesions do not look the same on different color skins or in the early stage or late stage or in young or old patients.

So we've done some surveys and have collected data on the use of VisualDx over the many years that we've had the product out there in the space. And we did several surveys around time savings because we know that's important for clinicians. And we've learned that VisualDx helps save up to 26 minutes per day. That varied depending on whether the survey was completed by a physician, a physician's assistant, or a nurse practitioner. But the average was 26 minutes.

Early on when we first took VisualDx to market, we did a randomized, blinded study that compared VisualDx with text books and atlases and saw that VisualDx improved diagnostic accuracy by more than 120%. And in surveys that we've done, 97% of physicians believe that VisualDx improved the care they were providing to their patients.

So let's take a look at more about VisualDx and about the product. So VisualDx is currently used in over 50% of US academic centers, also in over 1,600 hospitals and large clinics in the US and around the world. And we've had a relationship and have been working with the VA now for six years. So VisualDx has been accessible at all VA sites for six years now.

The search technology in VisualDx is patented. You can search by a chief complaint, diagnosis, or medication. VisualDx has been recognized by an organization called KLAS as the category leader for clinical decision support for five years running.

I think it's also important to note with regard to KLAS that, number one, they are an independent organization that goes to clients and asks questions about the client's relationship with us as a business and also about the product. And we are in a category with products like UpToDate, DynaMed, ClinicalKey, Micromedx-- so products that are widely used out there in the market. And the category has existed only for the five years that we've been ranked at the top.

Down at the bottom of the slide, you'll see a few sites that are already using VisualDx-- Harvard, UPenn, Yale, UCLA, Intermountain, and Mayo Clinic-- and some publications and TV shows that have featured VisualDx.

So VisualDx easily integrates into the clinician workflow. The product is web based and can be accessed via any modern browser. There's no installation required. And customers can be deployed within hours.

If you think of an organization the size of the VA, we had a list of IP addresses. And within an hour, everything was up and running. Mobile access is included with all of our clients, including the VA. And I'll show you how to set up an individual account that will allow access via mobile devices. VisualDx is interoperable with leading information resources including UpToDate and Lexicomp.

We do have these integrations set up within the VA. So if you are in UpToDate and do a search for a diagnosis or a finding that matches up to VisualDx, you'll be able to seamlessly move into VisualDx. And we also integrate into top E-records systems via the HL-7 technology. We also have the API for FHIR already developed.

And let's just take a look for a minute at the difference between looking at a text based description of a diagnosis and then seeing the actual visual representation of that differential within VisualDx. So our patient has presented with a fever. They have multiple skin lesions that have developed acutely. The patient appears ill. They're somewhat tired. And they told us they just traveled to and returned from El Salvador, where they were bitten by a mosquito.

So if we listen to that history, there are all kinds of things rolling in our head. But we might quickly jump to the Zika virus because it's been in the news so much. But would that be fair to our patient? We should really consider all of the possibilities within the differential.

And here are three of those possibilities represented as they would be represented in VisualDx with the Sympticon, which is our human diagram with the organ and areas of the body

highlighted that are impacted by a diagnosis. And all of the hallmark findings for that diagnosis also appear in the Sympticon.

So we can see that in addition to Zika, which we might jump to, we should consider diseases such as chikungunya and dengue fever and others.

So what makes VisualDx so valuable to clinicians? There are guided work-ups. And again, when I start the demonstration of a product, you'll see that each time a finding or a drug name is entered into the system, you're taken to a page where the work-up and the questions you can ask your patient or the findings you can add to VisualDx are customized to your starting point.

Also-- so again in looking at the value of VisualDx -- you'll see the guided work-ups. There is also concise clinical information written for the point of care. We have expert peer-reviewed text. But it's written in such a concise way that you can quickly read through it right at the point of care. And the way VisualDx presents the differential diagnosis and the diagnosis information, it's easy to engage in dialogue with your patients.

And in case anyone on the line has any questions, here's my email and my phone number and also some links to some sites that have more information about VisualDx. And Lyn, I believe now we're going to ask for any questions from the audience.

LYN SCHULTES: Great. Thanks so much, Donna. And just to clarify, it sounds like you've got everything back up and running. Is that right?

DONNA REINHART: Yes.

LYN SCHULTES: OK, perfect. Great. Well, we have had a few questions come in from our participants. The first is asking if VisualDx is only for providers. What about registered nurses with RN diagnoses and care plans?

DONNA REINHART: VisualDx can be used by anyone within the VA system.

LYN SCHULTES: OK, great. And is an RN version under consideration for the future?

DONNA REINHART: Not at this time, Lyn. We have made the decision here to focus on continuing to build out the content in the different disease areas that would help and benefit all clinical staff at the VA and all of our other client sites. But we're not going to have a nursing-specific version at this time.

LYN SCHULTES: Got it. Thank you for that. Another question that came up is asking if the app offers the option to access PubMed the same as the computer version.

DONNA REINHART: OK, that's a good question. Within the app, we do have PubMed links within our reference section to abstracts within PubMed. And you can access those through the mobile version. But on the desktop version in our left-hand nav, we have a link directly out to PubMed that does not appear in the mobile versions.

LYN SCHULTES: Great, thank you for that, Donna. Well, I think we can keep moving forward through the demonstration of VisualDx. And we will circle back with additional questions after that. There it goes, Donna.

DONNA REINHART: OK, thank you. And sorry for that delay. OK, now for everyone in the audience, we're going to take a quick look at the actual product so that I can give you an idea of how you can get to the valuable information that's contained within VisualDx.

So any time you open VisualDx from a desktop, from your iPod, from your iPhone, from your Android device, you'll be taken to a home screen that has the boxes just like on this screen here. On a mobile version, everything is just compressed down a little bit in size. But all of the same information is there.

So to get to VisualDx, one of the first things that many clinicians want to do is just confirm a diagnosis within VisualDx. I'm sorry. The system timed out. And I'm just going to get it back up. And OK, so we'll do our search for poison ivy because our patient presented with blistering lesions. And we just want to verify, could this be poison ivy? Because the presentation is a bit unusual.

So I can quickly type in poison ivy. And I get into a page that looks just like this. Within VisualDx, there's information about over 2,700 diagnoses.

And when you get, as a user, to any diagnosis page, everything is set up the same. There's navigation down the left. There's the synopsis, designed to be used at the point of care, in the middle. And then if there are images, they are on the right along with the Sympticon for that disease, which depicts all the hallmark findings.

So because we're looking at poison ivy, the first thing we want to do is look at all of the images just to see if this might be what's going on with our patient. We want to confirm our diagnosis. So you can see all 50 images.

One of the other things that you can do within VisualDx for any diagnosis where there are images is filter them based on skin color. So my patient has dark skin. And I want to see those images alone. So I checked them all off, all the different gradients of skin color. And you can see all of the images here on the screen.

Now, let's go back and take a look at the handbook length text. First of all, you can print any of these pieces of text by clicking on the Print function. For over 200 of the most common diagnoses, there is a patient handout that you can either print or email. And we also have the ability from this view to go into all the images.

So in looking at the text summary, there's a synopsis. The ICD-10 codes and the SNOMED codes, what to look for, diagnostic pearls, the classic textbook differential, best tests, management pearls, and therapy. None of the therapies within VisualDx are branded. And we take no support from any pharmaceutical companies.

On the left-hand side of the page, I do want to say that you can navigate into UpToDate if you so desire. And you can also click into PubMed. And I'd like to say to the audience that these two links do not appear in our mobile version.

So in addition, you can also type in any drug name. Let's say our patient is sitting in front of us. I'm a rheumatologist. And they're on a visit. And at the 11th hour, they mention, oh, I have this rash on my leg. And the physician asks a few questions and learns that the only thing different that the patient has done is taken a couple doses of naproxen recently.

So we can do this customized work-up. And this is what we mentioned in our product overview. For everything that we enter, except when we do a very specific diagnosis search, we'll always be taken to a customized work-up. But we can just view the differential so that we can see all the reactions to naproxen. Now, how can anyone possibly remember that there are 64 diagnoses or reactions that could occur following the dose of a naproxen?

Now, this is a good time to point out all the Sympticons. And the Sympticons with the red header, the diseases with the red header, are life threatening and could really require some immediate attention if that's what you suspect. We can also change this view so we can see the mix of images and Sympticons. So any possible reaction that has a skin involvement would be shown. And we can quickly look at a quick overview or look at the diagnosis details just from the page that we're on.

Another search that you can do in VisualDx-- let's say our patient is giving us their history, very similar to the example in the PowerPoint. And they said they just came back from Haiti. They had been there on a religious mission.

This time, we'll answer a few questions. You can see we're taken to the customized work-up for Haiti. And we say that our patient appears ill. And it's developed acutely. And we want to say that they were bitten by a mosquito. We'll change the age of our patient. And we'll also say it's a male.

When you see that couple-second blip in VisualDx, what the product is doing is adjusting for any age-related diagnoses and also any diagnoses that might be male- or female-specific. We also have a pretty strong differential. VisualDx will always give you an indicator of the differential diagnosis strength or the relationship of the findings that you've entered. And we can click View This Differential.

And here we go. All the mosquito-borne illnesses that someone might pick up following a trip to Haiti-- you know, chikungunya, dengue, malaria, Zika, and so on. We can go into any one of these by clicking. We can also see an enlarged view of the Sympticon, the hallmark findings, and the involvement of the different areas of the body.

So those were all searches where we started with either a diagnosis, a drug, or some patient factor. But let's say our patient comes in to see us, and their chief complaint is vomiting. We are taken to the customized work-up for vomiting. And we can start to enter findings into VisualDx.

Patient has a headache, some dizziness. We'll leave the age and sex the same. And we'll click View This Differential.

Again, the important diseases first. We can change the view to photos so that we can see any diagnoses with images or a visual presentation. We can see I just clicked on West Nile to again give you an idea. And if we wanted to view all of the details, we could click down at the bottom.

I'm just going to show one more example just to show you the depth of the system. Our patient presented with eye pain that's developed rapidly. They have some redness and some gritty eyes. And they wear contact lenses.

Now, in this case, our differential is going to look a little different because if we showed Sympticons here, the eye would be highlighted in every Sympticon. And there would be very little differentiation. So with the eye diseases, our editors have chosen to show all eye images to represent every possibility within the differential.

Just a couple more things about VisualDx that are important. If you are at a VA site or logged in through the VA network through Athens when you're remote or anything that allows you to access VisualDx via the VA network, and you want to set up an individual account that allows you to get the mobile, you just click down at the bottom. Now, because I already have a mobile account, I didn't get the form. But normally a form would pop up here that allows you to set up an individual account. Then you would go to the Apple App Store or the Google Play to download the app and enter the username, which is your email, and a password that you've told us to activate the access to VisualDx.

Once you set up the individual account, you can also earn one half AMA PRA Category 1 Credit for every use of VisualDx if you're logged into your individual account. And VisualDx, we store the uses. When you're ready to claim your CME credits, you go in and answer a couple questions about the use of VisualDx on that particular day and with that particular diagnosis. And we track the credits that you earn and allow you to print out a certificate when it's needed.

So Lyn would like to open it up to the audience for any other questions about VisualDx that they might have.

LYN SCHULTES: Great. Thank you so much, Donna. We've had a handful of additional questions come through. The first is asking if the information in VisualDx can be emailed to patients, and if all of the patient information is provided in English or if there are any other additional languages available.

DONNA REINHART: Right now, VisualDx is only in English. But we do have an interesting project that we started this summer around translation. So I would say stay tuned. And in the future, it's possible that VisualDx will be available in other languages.

LYN SCHULTES: Excellent. And can the information on VisualDx be emailed to particular patients?

DONNA REINHART: We have a way-- I'm going to go back into the poison ivy example, if that's OK. And what you can email to a patient is this patient hand-out. If we have one, there is a way here. If you click to email, you just put in the recipient's email address.

One thing that I think is good for us all to know is that we don't store the emails. And the email itself does not come directly from the physician. It comes from our server. So we're meeting all of the HIPAA requirements by not storing the patient's email that receives the information.

But our other information cannot be emailed. There's a way to share information from VisualDx. But the links have to be sent to another user that has access to VisualDx.

LYN SCHULTES: Got it. That's very helpful. Another question is asking if you could speak to which VA office is conducting the roll-out or popularization of this product.

DONNA REINHART: So we have worked very closely with Nancy Clark and the team at VALNET for over the last six years on awareness of VisualDx. But our project is funded at this time at the VISN level. So each VISN is contributing to the cost of VisualDx.

LYN SCHULTES: Great. An additional question that came up is asking if the site can be accessed from desktops.

DONNA REINHART: Yes. So each VA site is different in how they set up the access to VisualDx. It's usually found through the Tools dropdown in the electronic record. But also from any desktop computer within the VA that has internet access, if you type in visualdx.com and click Launch in the upper right, you will get right into the product.

LYN SCHULTES: Super. And Donna, can you talk a little bit more about how VisualDx is considered evidence based?

DONNA REINHART: So Lyn, I think to save time for our audience-- I know that's a very complicated answer. So it would be good if we provided that answer later because it is, like I said, a pretty long and involved answer.

LYN SCHULTES: OK, great. We will follow up with participants following this webinar to respond to that. One final question for you, Donna, is there an information sheet available on the CME features?

DONNA REINHART: Yes, on the VALNET site. And I believe we have a URL available to that. But Nancy Clark and her team have posted information on their site around how to earn CME with VisualDx.

LYN SCHULTES: Perfect. Well, those are all the questions that have come through from participants. Is there anything else, Donna, that you wanted to add before we close today?



DONNA REINHART: Nothing except, Lyn, that there are ways to reach us through the product or by going to [visualdx.com](http://visualdx.com). And we're happy to answer anyone's questions about the use of VisualDx, about downloading the mobile, or about earning CME from VisualDx.

LYN SCHULTES: Great. Well, with that, we will thank all of our participants for joining us today. Please visit the link to provide feedback and let us know how we're doing as well as any additional topics that you'd like to hear about.

Thanks again for everyone's time. And have a great weekend.