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Breaking Down Barriers for PAH Patient Risk Assessment Through EHR Systems

ReachMD Voiceover:

Welcome to ReachMD. This medical industry feature titled, "Breaking Down Barriers for PAH Patient Risk Assessment Through EHR Systems," is an educational activity that is brought to you by the Janssen Pharmaceutical Companies of Johnson & Johnson and is not certified for continuing medical education. This program is intended for US healthcare professionals only.

Our guests today are Dr. Abhijit Raval, Director of Interventional Pulmonary and Pulmonary Vascular Disease, and Kelly Dickson, Respiratory Therapist and Pulmonary Hypertension Navigator. Both are paid consultants for the Janssen Pharmaceutical Companies of Johnson & Johnson. The speakers are presenting on behalf of Janssen and are presenting information in compliance with FDA requirements applicable to Janssen.

And now, here is your host, Dr. Randy Young, a paid consultant for ReachMD.

Dr. Young:

Pulmonary arterial hypertension, or PAH, is a rare disease with a traditionally poor prognosis.¹⁻³ Despite scientific advances in the understanding of the pathophysiology of PAH and a multitude of available therapies, this clinically challenging, progressive disease remains without a cure which is why timely and effective clinical intervention is essential.^{2,4} Helping patients achieve and maintain a low mortality risk status, which has been associated with improved outcomes is the overall treatment goal.^{1,5} To this end, several tools have been developed to assess risk status in patients with PAH;⁴ however, widespread clinical implementation of these tools to date is considered to be fraught with barriers.⁶

Joining me today to discuss their experiences building risk assessment tools into their institution's electronic health record, or EHR system, are Dr. Abhijit Raval and Patient Coordinator Kelly Dickson.

Dr. Young:

Let's begin with you, Dr. Raval. Why is timely and regular risk assessment for patients with PAH so important and what are some of the tools that healthcare professionals such as you can use to accomplish it?

Dr. Raval:

Assessing a patient's risk status not just at the time of the diagnosis, but at regular intervals, helps us to evaluate the progression of patient's disease and subsequently helps inform decisions around what treatment may be most appropriate for them.^{1,5,7} There's a wealth of clinical data that help demonstrate that comprehensive multi-dimensional assessment of patients one-year risk of mortality is essential to the management and treatment of PAH.^{1,4,8}

There are several approaches we can use to assess risk in PAH patients, including the use of risk variables outlined in the European Society of Cardiology and European Respiratory Society guidelines for pulmonary hypertension, risk prediction equations such as the French PAH Registry and National Institute of Health equations, and risk score tools such as, REVEAL (Registry to Evaluate Early and Long-Term PAH Disease Management) 2.0 and REVEAL Lite 2.^{1,7,9-11}

As REVEAL Lite 2 has been clinically validated, I would like to focus on that tool in this discussion in addition to its original counterpart REVEAL 2.0, as the two are complementary.¹¹ REVEAL 2.0 and REVEAL Lite 2 estimate mortality risk in patients with PAH by assigning scores to 13 and 6 clinical variables respectively in order to calculate a cumulative risk score.¹¹⁻¹² The variables included

within REVEAL Lite 2 are all exclusively non-invasive and modifiable and include functional class, vital signs, both systolic blood pressure and heart rate, 6-minute walk distance, BNP, or NT-proBNP levels, and renal insufficiency by estimating the glomerular filtration rate.¹¹

To assess PAH mortality risk in clinical practice for treatment-naïve patients, REVEAL 2.0 should be used at the time of diagnosis, at checkups every four to six months, and for annual evaluations.¹¹ The abridged REVEAL Lite 2 was developed to provide clinicians with a simplified method that may be used in between these time points.¹¹

Dr. Young:

Thank you for that overview, Dr. Raval. Now, let's talk about what's happening in clinical practice. Are these tools being used routinely to assess risk status in patients with PAH?

Dr. Raval:

Great question, Dr. Young. Pulmonary hypertension healthcare providers in the U.S. were recently surveyed online about the use of risk assessment tools, as part of the study to investigate the use of such tools within clinical practice settings. Of the 121 PAH treatment decision-makers who responded, 59% reported using risk assessment tools in general, with less than two-third of physicians and less than a half of healthcare professionals, such as nurse practitioners and physician assistant, reporting the use of formal tools to assess patients' risk.⁶

Dr. Young:

That's an interesting finding. So, Dr. Raval and Kelly, why do you think we aren't yet seeing widespread and consistent utilization of these tools despite the fact that they've been clinically validated?

Dr. Raval:

In the same survey I just mentioned on PAH treatment decision-makers, one of the most cited barriers to the use of risk assessment tools becoming standard practice was a lack of technological integration with the electronic medical record platform.⁶ I'm sure Kelly, you can relate to this.

Kelly Dickson:

Yes, I certainly can. Not having risk assessment tools built into our EHR often meant our team was taking on a higher degree of manual work in recording patient parameters, calculating their risk scores, and tracking the information over time.

Dr. Raval:

To build on Kelly's point, I would like to touch on another reason why we may not yet be seeing widespread use of risk assessment tools. As physicians, we recognize that our clinical judgement plays a vital role in assessing and treating patients. But, when we rely on it to assess risk status in our patients with PAH, data shows that can lead to over or under-estimation of risk when compared with assessment made using objective methods.^{6,13}

To expand on this point further, a retrospective chart analysis of patients considered low risk as assessed by clinical judgement showed that 11% to 36% were categorized as intermediate risk and 4% to 28% were categorized as high risk using various formal risk assessment tools.¹³ In particular, the analysis found that a large proportion of World Health Organization, WHO functional class 2 patients, who were often considered to be at low risk for disease progression as they have only mild physical activity limitations are at intermediate or high risk for disease progression and thus, may require treatment escalation.^{1,13}

Overall, there appears to be a clear discordance between risk status when we are using our clinical judgement versus using standardized validated tools.¹⁴ We must keep in mind the importance of timely and regular risk assessment for patients with PAH and to strive to use objective risk assessment tools to optimize patients' care.⁶

Dr. Young:

For those just tuning in, you're listening to ReachMD. I'm Dr. Randy Young, and today I'm speaking with Dr. Raval and Patient Coordinator Kelly Dickson about their experiences building risk assessment tools into their institution's electronic health record, or EHR system.

Dr. Young:

I'd like to revisit a point made earlier about risk assessment tools being integrated within electronic health record platforms. I'm curious to hear your opinions as to the progress being made to address the barriers to standardize the use of such tools.

Dr. Raval:

Yes, I'm eager to share my experience. We had already been exploring the idea of integrating clinically validated risk assessment tools into our institution's EHR when we learned about the EHR Build Guide from Janssen, an educational resource that provides step-by-step instructions for health system to incorporate the REVEAL 2.0 and REVEAL Lite 2 risk calculators into their EHR system. This resource complemented the work we had already started and helped us to take the steps to complete the initial build.

I personally was motivated to make this happen so that we could have a standardized, readily available tool for risk stratification of PAH patients at our fingertips to help clinicians such as myself and other members of care teams, such as Kelly, address the barriers of incorporating risk assessment into clinical practice.

Kelly Dickson:

Because I work so closely with all of our PAH patients and am familiar with the data we collect on an ongoing basis for risk assessment, Dr. Raval wanted to make sure I was involved in the development of the REVEAL calculators in our EHR. We had a fair amount of back-and-forth communication with our EHR provider and IT teams since there are many different versions of EHR software and we needed to be aware of any logistical constraints. But as Dr. Raval shared, we're thrilled that we now have these tools in our EHR and can use them in everyday clinical practice.

Dr. Young:

It's important for me to mention, the purpose of the Build Guides is to serve as an educational resource for healthcare professionals only. Each institution is solely responsible for implementing, testing, monitoring, and ongoing operation of any tools they choose to implement within their EHR system. The instructions contained within the Build Guides were not intended to replace a health system's processes or protocols and are not intended to be an endorsement or recommendation.

Dr. Young:

So, Dr. Raval and Kelly, now that you've completed the initial build of the REVEAL calculators in your EHR, I'm curious if you can speak to any challenges you've encountered along the way? Let's start with you, Kelly.

Kelly Dickson:

One of our biggest challenges has been from a navigational perspective in terms of figuring out what context we need to pull up to access the flow sheet that allows us to use the calculators. Once I figured it out, I'm comfortable knowing more about the system when it's time for objective risk assessment of the patient, though I still maintain paper records for our patients, as well.

Dr. Young:

What are your thoughts Dr. Raval?

Dr. Raval:

I'm thankful for Kelly's dedication and commitment to objective risk assessment and I'm thrilled that we have been able to integrate the REVEAL calculators into our EHR based on the instructions in the guides from Janssen. I consider what we have done to be all the work in progress as we make refinements and customizations to get to a solution that will work best for our full PAH care team.

Dr. Young:

That brings us to the final question in our program, which is, to put it quite simply, where do you go from here?

Kelly Dickson:

Since we have implemented the risk calculators within our EHR, I've been able to track patients' risk scores over time. I can see the impact on risk assessment categorization, especially if risk assessment is done regularly and we have consistent data. That's why we continue to reinforce education to our patients, as they need to do their part in providing self-reported data so that our calculations can be complete.

Dr. Raval:

I agree with you, Kelly. These tools will become most effective to us when we are using them consistently and when patients are playing an active role in monitoring and reporting their own data to complement the tests we are doing in our office during the follow-up visit.

My goal for our care team is to acknowledge that we are seeing the patients' risk scores over time in the EHR and to connect that output to decisions we need to make about their treatment journey.

Dr. Young:

Thank you for sharing your perspectives Dr. Raval and Kelly. That brings us to the end of today's program. I appreciate you both joining me today and wish you the best as you continue to advance the use of risk assessment tools within your EHR and their impact on patient care.

Dr. Raval:

Thanks so much for having us.

Kelly Dickson:

It was a pleasure to be here.

ReachMD Voiceover:

The EHR Build Guides can be found on the landing page of this program in the Related Content section at the bottom of the page. You may also visit www.PAHRiskAssessment.com to access them.

This program was brought to you by the Janssen Pharmaceutical Companies of Johnson & Johnson. If you missed any part of this discussion visit reachmd.com/pah-perspectives. This is ReachMD. Be part of the knowledge.

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