

Marc Parnes, MD:

Welcome to the Columbus Medical Association's Emerging Trends in Healthcare Event. I'm Marc Parnes, the President of the Columbus Medical Association Foundation. The Columbus Medical Association foundation has a long history of supporting community health through our program priorities, the Physician CareConnection, the Central Ohio Trauma System, the Healthcare Collaborative of Greater Columbus and the Physicians Leadership Academy. Programs such as these align with the Columbus Medical Association Foundation's mission of education and supporting physicians, their patients, and the central Ohio community. We hope that this program brings you useful information on the lasting effects of COVID-19 and possible solutions to this difficult problem. I invite you to learn more about the Columbus medical association foundation and our work by visiting cmafohio.org. I'd like to end by thanking our wonderful speakers, the CMA for organizing this event, and you for your interest.

Bob Falcone:

Thanks, Dr. Parnes, and thanks to all our sponsors, I'm Bob Falcone, CEO of the Columbus Medical Association and Affiliates. Today, we have a panel of experts to discuss the long-term sequela of COVID-19 infection. Also, known as the COVID long haul syndrome. We will cover incidence, symptoms, pathophysiology, management, treatment, and prognosis from the perspective of primary care, immunology, infectious disease, cardiology, pulmonary critical care and psychiatry. Let's start with Dr. Arthur Palmer. Dr. Palmer is a primary care physician with Central Ohio Primary Care. They are in fact, the largest primary care group in the country. They have been ahead of the curve with the COVID pandemic since January and continue to innovate even today. Dr. Palmer is involved with a variety of patient care opportunities with COVID, but I'd like to start with just welcome.

Dr. Arthur Palmer:

Thanks so much. Thank you, Dr. Falcone. I appreciate the chance to be on here.

Bob Falcone:

Tell me what what your physicians are seeing.

Dr. Arthur Palmer:

Yeah, we've got to go back to the beginning of this, I think to really explain what we've done and our experience. I'm the director for essentially our Urgent Care centers. We were very early on, on moving to video early March. mid-March when we saw this coming. We wanted to be very careful about bringing people in, and I'm sure you all recall at the time, we really had nothing to offer people who had COVID other than waiting at home until they were very, very sick and then bring them into the hospital. While it might sound ... It sounded reasonable that you could do this over the phone, triage people on the phone or video, and there really wasn't a role for an in-person evaluation. What we very quickly learned with doing a lot of video visits is, we're all primary care doctors, and sometimes you've got to lay hands on a patient and you suspect COVID is not the most likely diagnosis.

Dr. Arthur Palmer:

What we did is we centralized, we scraped together all PPE. I used to go to Home Depot on regular runs, looking for equipment. We used a separate physician office that did have x-ray and was isolated from our other facilities. We got some volunteer, some really amazing nurses and staff and other doctors to help out and March 27th, 2020, we had our first day when we had, I think, 10, 12 patients to see, and

really evaluate like you would in an Urgent Care setting but with full PPE. We had people, we triaged them through phone. We had no visitors, we'd meet them out in their car, support them through very, very careful. It turned out to be quite a success. One thing we found is patients were very scared, understandably, and they felt like no one would see them. Sometimes that was helpful.

Dr. Arthur Palmer:

We found a number of treatable conditions that we could have potentially missed on video alone. It allowed our docs to be a little more aggressive, if you will, on a video, knowing there was a backup that the choice wasn't just emergency room or home. That was very helpful. It helped our patients. We've been running that in some form that since March of 2020, and we've seen an almost 3,000 patients. That's how we got started. We've got that running this whole time. Lots of, like I said, the team has just been amazing, support from our leadership to do this and from all of the staff and all the different PCPs at COBC. That's what we've been doing, and we find it still useful even as the volume in this clinic has dropped, as we've gotten better at figuring out what we can safely see in other offices, we're still running it.

Bob Falcone:

As you had suggested, the COVID pandemic is leveling a bit. People are getting vaccinated, they're wearing masks, they're staying distant, but now they're coming back to your office after they've gotten over their initial infection and they're coming back with more symptoms.

Dr. Arthur Palmer:

Yeah.

Bob Falcone:

What are you seeing?

Dr. Arthur Palmer:

This is really interesting. We actually saw this fairly early on when we'd see, and I'm sure the number of folks on have seen this too, especially in hospitalized patients, we weren't yet ... Routinely now, we do not retest people, but we were seeing people, serving people who would stay positive and they'd have ongoing symptoms, six weeks out. There was talk of this longer phase of COVID early on. Then we triaged people to a [inaudible 00:05:33] evaluation clinic based off symptoms. We'd find these people who've had COVID-type symptoms, altered sense of taste and smell, shortness of breath, even chest pain for six weeks. They'd still end up back in this, what was really supposed to be an acute evaluation clinic, and we started talking about, "Well, what can we do for these people?"

Dr. Arthur Palmer:

It's another one, it's very interesting patient-driven movement, I think, largely where you've get people talking about the long haulers and networks springing up and really helping drive some of the care for them. We've seen, it's largely specialist-based in New York and on the west coast, there's some COVID-related clinics. Our organization, we really are big boosters for primary care. We think your doc, your primary care doc is the best person to handle this. What have we figured out? Well, one not to get too much off of a tangent, but it's interesting. I'm a big fan of evidence-based medicine. The last year has been a really interesting study in having essentially no evidence base for what we're doing. I mean,

we're, we're all scrambling to find studies. There's not through any fault of the authors, but they're not good randomized controlled trials.

Dr. Arthur Palmer:

They can't be. It really is almost, I don't know, throw back to you got to depend on your clinical judgment, your skills, your experience. In that setting, I mean, what do you do for these people? Well, one of the things we found early on was they felt really isolated, especially with people with long symptoms who they may not have been seen since they were in the hospital. Sometimes even us in our full PPE, they were just so happy to be seen and listened to. That's important. We can lose sight of that sometime, but that right there is it's in a healing effect that I don't ... Not to sound too touchy-feely, but it's [inaudible 00:07:14]. Also, you run the same risks. We found the video visits of what if they've got something else and you're attributing all their symptoms to prolonged COVID?

Dr. Arthur Palmer:

That's a very real concern of mine, in the Urgent Care space. We could do harm by attributing all these to long-terms. There is something that we need to do. They're well within a normal primary care office, EKGs, chest x-rays, physical exam, labs. We started doing a little bit more of that. We started discussing it, like I said, some wonderful physicians who've helped out with this and staff. What do you see in the hospital? What can we do? We started talking to our primary care docs who said, "Yeah, this is would have anything from," they say, "I've got a couple people in my practice of 1,000 that have these symptoms," to some saying, "I've got 20 or 30, or still having COVID symptoms. This is a real issue."

Dr. Arthur Palmer:

We want to help the PCPs as well as our patients. After, again, this has been a little bit more of a collaborative approach where we said, "Well, what can we do and what what's safe? What are other people doing?" Again, not a big evidence base here. We figured what are the key things we need to do to take care of these people? One, are we missing some, again, treatable, serious illness? Congestive heart failure, pulmonary fibrosis. Did we miss a stroke at some point, all these things. We feel pretty comfortable evaluating people for that, getting them in for that. We've had some people question, "Well, what are you actually going to do for these folks if there's no evidence base?" Well, we treat the thing that's there. If there's something else. Again, listening is very helpful. Then we have a wonderful physical therapy and respiratory therapy departments here within COPC.

Dr. Arthur Palmer:

We actually worked with them to have a visit where they can get a full respiratory therapy eval, including spirometry, and then also sometimes physical therapy on the same day and get a team working for them. This is still, we're still using actually hospitalists who also work in the outpatient setting to do this. Who are quite comfortable with it where it's not specialist-based at all, and we really just gotten it going. There's been quite a demand for this from ... We're getting lots of patients. We then have, if we need to send someone on to pulmonary, cardio, renal, neuro, we'll do that.

Dr. Arthur Palmer:

The other idea here is, again, these folks who feel marginalized might be a strong word, but certainly, they sometimes do. They're getting listened to. We're saying, "Let's make sure we're not missing something serious, and then we'll help you where we know we can." Some of these people might even be a little volume overloaded with [inaudible 00:09:52] heart failure. Maybe we've got a treatment. I

don't want to go too far into that because again, no evidence base, but we're listening to you, we're keeping track of you and then getting these, our respiratory therapy involved as well as physical therapy, seems to be quite helpful. That's the foundation of this.

Bob Falcone:

Which it sounds like you've put together a multidisciplinary clinic based in primary care, which makes complete sense.

Dr. Arthur Palmer:

No question.

Bob Falcone:

Do you have a name for this?

Dr. Arthur Palmer:

Yeah, so we talked over, we've ended up settled on Post-COVID Recovery Clinic. We think it's really important to stress recovery. I did forget a key component, behavioral health. I think everybody sees this in these patients and everybody understands it and we are trying to get ... We're screening all of them for depression, but also very quick to get them set up with a counselor or even informative efforts to try and see if we can get some group sessions going for folks, which is also as they get past their 90-day window where they're theoretically contagious brings up some other issues, but that's absolutely crucial. I think most primary or all primary care docs will recognize there's a behavioral health component to so much disease, chronic and acute. It only makes sense it would be in this case as well. It's an area we're just seeing that folks can help.

Bob Falcone:

Yeah, that's very exciting, and I think is as usual COPC is ahead of the curve, I congratulate you on that. We've got a number of other experts to talk to, and I appreciate your time. Thank you.

Bob Falcone:

Hi, Dr. Meara. As a rheumatologist and an immunologist at the Ohio State University Wexner Medical Center, you're perfect for this discussion on COVID and long haulers. Before we get to COVID, let's talk a little bit about viruses. What do we see in general with severe viral infection and sequela?

Dr. Alexa Meara:

I think a virus and autoimmune disease is a long history there. You think about parvovirus and slapped cheeks and then women showing up and then having an inflammatory arthritis, the Chikungunya virus from South America that has an inflammatory arthritis as a sequela. Chronic Lyme disease. There's many discussions and different takes on that, but infection creates an immune response. In some people, that immune response leads to a some sort of long exposure of either an autoimmune disease or some people just take longer to get over it, or it creates autoimmune disease, right? To create autoimmune disease, you just need the right genetic host within right environmental stimulus. In some people, all that is, is an infection. Us in rheumatology, the understanding that a virus can start off a cascade of symptoms that may lead to an autoimmune syndrome is pretty normal. It's what I do every day.

Dr. Alexa Meara:

COVID is unique in the sense of the amount of numbers of people having the one virus all at the same time, because if you think about adenoviruses or parvoviruses in kids and different things, you hear it and they have a high fever, but it's not 100 million people all at once. It's easy to figure out the resources and who they need to see if it's one out of a million and please don't totally quote me in those datas, but however often that happens. In those examples, it's a lot easier to handle and COVID now with patients having exposed to a virus, some people are taking longer than others to get better. Some people are developing new symptoms after COVID. The numbers now are just very different and it's exploding, and so how do we create systems to be able to take care of those things?

Bob Falcone:

[inaudible 00:13:56] denominators much larger with COVID. Is the pathophysiology immune, or is it a persistent virus? Is it some combination?

Dr. Alexa Meara:

No, it's probably not persistent in virus. Actually COVID, there was a great article that just came out that talked about the autoantibodies that are created, particularly in COVID antibodies. There are certain viruses that just for whatever reason, create more autoantibodies. There's a long discussion of EBV and autoantibody disease. I mean, lupus and EBV has been long or CMV has been long discussed in those kinds of things. COVID, it does create a new unique autoantibody spike. The question is what's, because that's all correlative, what's causal, right? Just because I create all these autoantibodies, do you actually create an autoimmune disease?

Dr. Alexa Meara:

I don't think that we know that yet. It probably is the right genetic host. Some people may just have some symptoms, a viral arthritis or viral post symptoms, like macrophage activation syndrome post-infection. Some people just take longer and have kind of an odd immune reaction post, but then they never need anything else, right? They may be followed, but they need some steroids and it takes them six months to recover and then they're great. In other people, it develops into other diseases. COVID is unique in that sense, and we're seeing a lot of autoantibody spikes, but I would say that it's really hard to interpret of what's actually meaningful and what's going to actually last longer in patients.

Bob Falcone:

With COVID, the serious complications during the infection aren't more immune, they're an acute inflammatory response that leads to a lot of multiorgan damage.

Dr. Alexa Meara:

Correct.

Bob Falcone:

For the long haulers, they don't necessarily have to have a serious illness to get this [inaudible 00:16:01], right?

Dr. Alexa Meara:

Correct. Right. It's just, unfortunately it's again, combination of kind of maybe luck, circumstance and your genetics and you have the infection. For some people, the chronic fatigue, or pain, or arthritis, or arthralgias-like symptoms, or rashes, or shortness of breath, I mean, there's a barrage of symptoms. I think we're still trying to figure out what symptoms are post-viral just taking longer to improve. Sometimes it's pneumonia or bronchitis, we'll tell patients, it takes six to eight weeks before your cough gets better. You're like, "Don't get an x-ray, it's going to take some time." I think with COVID, we don't know what those parameters of your shortness of breath is going to get better, but it's going to take like three months and we can support you. I think, because one it's a more novel virus and the volume was so high and everyone had the same complaint at one, so we're still trying to figure out what's a transient post-viral response.

Dr. Alexa Meara:

Versus what's created now a new kind of chronic disease in that patient. As a rheumatologist, I think uniquely, I deal with uncertainty all the time. I don't know what I'm treating sometimes. I have these large boxes and they kind of fit in a vasculitis world, versus a lupus world, versus inflammatory arthritis world. I have the same pot of drugs for all my diseases. I kind of pick and choose based on that. For me to look at someone and say, "I don't know exactly what's going to happen, but we're going to try this. I can get you to feel better," is basically what I do every day. That uncertainty for me is common, and I think I have a confidence of the uncertainty, knowing that I know that I can get them to feel better, no matter what box they end up going to. Eventually over time, patients define themselves. They will define the disease they have. I just have to give them the right amount of time and support. The question is how do you support them to be able to ...

PART 1 OF 4 ENDS [00:18:04]

Dr. Alexa Meara:

... support. The question is, how do you support them to be able to life participate, work participate, family participate, to get them through all of those avenues until they can get the treatment that they need or what not happens?

Bob Falcone:

Yeah. And I think you mentioned a number of potential symptoms that included musculoskeletal and dermatologic, pulmonary, cardiac. I think one of the biggest complaints I've heard anecdotally from people is this whole idea of the inability to concentrate or being in a fog. I don't know if that's just they've been sick and they're getting over it, or if that's one of the spectrum of symptoms that we attribute to COVID.

Dr. Alexa Meara:

So I think that this idea of brain fog, that falls under the chronic fatigue, fibromyalgia world. We are in the medical world. We are not great in defining pain and fatigue. This has been a chronic issue for the FDA. What are the outcomes? What are the measurable outcomes? How do you define it? Because it's such a subjective statement, what is brain fog for you and what is brain fog for me? And then, how do you measure that in improvement or decrease to be able to create a drug or a clinical trial to improve that? The definition of these diseases is really hard and it doesn't mean it's not important or valid, and I think that's where the medical world, it's difficult. So if someone sits in my office and they're like, "I just can't work," but there is no objective findings, it's really hard to figure out how to help them. And so I

think that's where there's a big disconnect for what people need and what patients need and us in the medical field.

Dr. Alexa Meara:

And I think the most important things for people with brain fog is getting a sense of control again back in their life, because a virus, no matter how sick you are interrupts your life. So whatever you normally were doing, you're no longer doing right now. Whether it was exercising daily, eating better, or eating different foods, because maybe you're now just eating chicken soup every day. So it disrupts your whole pattern of life, and so getting back to what that pattern was is going to be really important. I think a coping mechanism also is really important sometimes. If you are experiencing symptoms post of our viral syndrome or anything, any new disease or any new diagnosis, how do you deal with that? Because that changes your outlook on life. If it is a viral syndrome and if there was disruptions actually at the chemical basis from the virus, what you were before isn't necessarily what you may be after.

Dr. Alexa Meara:

And I think that, it's like a woman having a child in that sense. For a woman to have a baby, you have to have an immune tolerance of that child to be able to give birth. And so your immune system is different afterwards, good, bad, or indifferent. And so then whatever that means longterm now, and then we have to readjust for that. And I think some of those coping mechanisms, it's really frustrating. I think this is now how I have to feel, or I may not have the same tolerance. And maybe it's only a year, that's still a year. I'm not trying to dismiss that, but that's still a lot of time that they have to figure out how to function differently.

Bob Falcone:

Yeah. I come from a trauma background and some of the potential therapies for brain fog and distraction sound a lot like what we do for post-concussion syndrome. It's a lot of rehab, a lot of retraining. I suspect we're going to see the same with pulmonary and rehab and with exercise tolerance, perhaps re-looking at diet. But if they land on your doorstep and they've had these symptoms for two months, what do you do with their immune system? You beat it back. Do you watch them? Do you continue physical therapy?

Dr. Alexa Meara:

So 100% probably to all of the above. So I'll see them and I see what symptoms they have. For brain fog and fibromyalgia symptoms, we know that immunosuppressant DMARDs don't work. Those nerves and the way the nerves are talking, it's different. It just is what it is. Could it have an auto-immune start from that? Yes. But now the idea of me giving them a biologic or Rituximab is probably not going to make them feel any better and just puts them at risk for more infections. So I go down very much more of, if it's a brain fog and the pain syndrome, how is their sleep? Make sure they're sleeping okay. I'm a big fan of Duloxetine. I don't own any stock in those drugs. That's the one that I choose to work with really well. There's data on diffuse osteoarthritis and decreased pain, Duloxetine. And it's an NSRI, so it helps with pain and if they're a little depressed or anxious, it helps. So in my mind, let's try that, because it's not as sedating.

Dr. Alexa Meara:

Gabapentin, Lyrica, those drugs are great, but they have dose dependent weight gain, and that's often an issue for a lot of people. They don't want to gain weight. They're incredibly sedating. And so trying to

find the happy medium of how they can function and then what you can wean on and off. What drugs that we can stay maybe just to get us through this issue? And the lab work that I do for every new patient, I want to look for inflammatory reasons. Do they have a symptom or syndrome that is more than just brain fog? Do they have fibromyalgia or rheumatica? Do they have an inflammation? DO they have an impending inflammatory arthritis or tenosynovitis or something that's causing them not to have hands [inaudible 00:23:38]? Have they created a new autoimmune disease or that kind of stuff?

Dr. Alexa Meara:

As well as I look at general health stuff. Are their thyroids normal? Are they anemic? We're in Ohio so everyone has low Vitamin D currently in the middle of winter. So trying to help that and to increase that. Anything diet, I know a lot of GI upset and IBS symptoms, that's pretty common also with viruses. They wipe out your normal enzymes or gut, so getting back to some probiotics I think is totally a great thing for patients to do. I think going to talk with functional medicine physicians I think are great for an idea of how does your diet interact with your life and what could be improved upon in terms of the sensitivities and that kind of stuff. I think that's great. I don't think we quite understand that from a medical evidence-based world yet about how to do all that. I think diet is important and I think the gut microbiome is incredibly important, and I still think we're trying to figure that out.

Dr. Alexa Meara:

So I think that's up to the patient and what they want to do, but I'm very supportive of all of those things, because we just don't have the evidence. And because it disrupts patients lives differently for every patient, it is hard to have a one size fits all treatment. But I think the rehab component, the behavioral health component, depending on your psychosocial economic status, the social work component of access to healthcare, I think those are the three major components that I think are most important for those patients, and I may just be there trying to coordinate the care because I ain't really don't want a lot.

Bob Falcone:

Dr. Meara, that was great. Thank you so much for your time. This has been a wonderful introduction to COVID. I look forward to speaking with you again some time.

Dr. Alexa Meara:

Thank you so much for inviting me. Thank you, all. I'm around if you guys have any questions. And a dog.

Bob Falcone:

Next, I'm welcoming Dr. Joe Gastaldo. Joe is an infectious disease specialist and he's the System Medical Director for Infectious Disease at Ohio Health. Joe, we had a really nice chat with Dr. Alexa Meara, who talked about the immunology of post-COVID symptoms. I'd like to spend our time on the virus. As you know better than I do, a number of viruses cause sequela, post-viral sequela. How's COVID different?

Dr. Joe Gastaldo:

Yeah. Well, first of all, I'd like to thank you for having me talk about this important topic. I'm very honored and humbled to be talking about post-COVID syndrome with the CMA community, because it really is a challenging concept for our patients and also for providers. So the virus, coronavirus, SARS-Coronavirus-2, as you described, [Dr. Falculin 00:26:25], it is well known that many infections have post-

infection sequela, whether it be influenza, pneumococcal pneumonia, and even a post-sepsis syndrome. Those syndromes have been described for a long period of time. The issue with COVID-19 is that we really don't know a lot about it. There's no strict definition of it yet. The United Kingdom is ahead of us a little bit with talking about it, and their definition of it based on one of their recent publications where they measured it was people who were symptomatic after 28 days.

Dr. Joe Gastaldo:

And they recognize it in both people who have been hospitalized with all severities of illness, but also too with people who have not been hospitalized. It is seen more in women than in men, and the spectrum of symptoms describe post-COVID syndrome as very protean. And it includes things like fatigue, mental fogginess, shortness of breath, cough, chest pain, persistent nausea, diarrhea, and even myalgias. And those patients are looking for help, and there really is a mindset we really have to take care of those patients and be respectful of what they're going.

Bob Falcone:

So do you have a feeling for how much of that is structural due to the damage that the virus caused initially and how much it is residual, maybe residual virus?

Dr. Joe Gastaldo:

It's probably not from residual virus. There's good data out there that we know that unless you have high severity of illness, everybody clears the virus within 10 days. High severity of illness, most people clear the virus after 20 days. And those with weakened immune systems, transplant patients, those on long acting biologicals, those people can clear the virus longer over a period of time. PCR testing, you have to take with a grain of salt because, as everybody knows, you can be PCR positive and not have a virus that replicates. The gold standard testing is a viral culture, but most people are not considered still shedding live virus who have post-COVID syndrome. And when it comes to the disease process and what's causing it, it really depends on the patient's chief complaint.

Dr. Joe Gastaldo:

For example, those admitted to the hospital with severe COVID pneumonia, those patients are more likely to have lingering cardiopulmonary complaints. COVID, depending on the severity of illness, can have structural lung disease, lung scarring, pulmonary fibrosis. I've even reviewed a case report published in the literature here where somebody had to undergo a lung transplant after having a severe case of COVID. But, again, it really depends on what the symptoms are that people have.

Bob Falcone:

So what do you see in your practice?

Dr. Joe Gastaldo:

Well, my practice, I typically see a lot of primary care physicians who reach out to me and say, "Hey, Joe, I have this patient who had COVID and they have not bounced back." And they're reaching out to me for, "What next? What do I do with them? What is the methodical way to really clinically think about them?" And that's where really I think there's a big opportunity to talk to those patients and go through a checklist in your mind of things to think about when you evaluate patients who have persistent symptoms after having COVID.

Bob Falcone:

So give me an example of what that checklist would be like.

Dr. Joe Gastaldo:

Yeah. So when you see a patient who has post-COVID syndrome, you have to really cover your bases. So things to think about would be obviously a secondary bacterial infection. Do they have a secondary bacterial pneumonia? Try to tease that out. If they have persistent sinopulmonary complaints, is it worthwhile to really do a high resolution chest CT to get an idea of any structural lung disease? Depending on their complaints of shortness of breath or dyspnea on exertion, is it worthwhile to do formal pulmonary function tests to get an objective measure of what that looks like? Depending on their complaints and depending on their labs, other things to consider would be cardiac imaging studies, if they have those types of complaints with an elevated troponin. I always do recommend a sed rate or a C-reactive protein and a D-Dimer to see if there's anything inflammatory going on.

Dr. Joe Gastaldo:

COVID-19 does put people in a hypercoagulable state, and I always tell people to really have a low threshold to do a thromboembolic workup, especially if there's an elevated D-Dimer. COVID-19 is associated with both arterial and venous clots. So, again, those are the things that you really want to do to cover your bases and to give you an idea of the type of referrals to make. If your workup in the PCP office is really unrevealing, other things to consider would be the psychological trauma of recovering from COVID-19, whether it be anxiety, post-traumatic stress disorder. A lot of people after being hospitalized do lose some of their functional status, and I know in the real world, there are physical therapists who are working on exercise programs for post-COVID patients. I know at the Ohio Health Rehab Hospital, the therapists there have reached out to me to say that they are operationalizing a post-COVID clinic for people who need help with their exercise tolerance.

Dr. Joe Gastaldo:

So, again, those are the bases that you really want to cover when you see these patients. It really takes a special type of doctor to see these patients because you really want to be transparent with them and say, "Hey, you know what? It sounds like you have post-COVID. This is a syndrome that's not clearly defined. We don't know a lot about it, but guess what? I'm going to take care of you. I'm going to work with you. We'll get through this together." There are a significant amount of post-COVID patients who do get better over time with just supportive care and a tincture of time.

Bob Falcone:

And things like fatigue and you mentioned a mental fog, I suspect some kind of physical therapy or even cerebral rehab might be effective for some of those people.

Dr. Joe Gastaldo:

Absolutely. And I know, in addition, there are neurologists within the Central Health Community. I know at Ohio Health, Dr. Daniel Smith, is a neurologist who has a special interest in post infectious neuropathies and encephalopathy. So within the area of neurology, cardiology, pulmonary, there are leaders in our community who are taking a special interest in helping out and supporting and evaluating post-COVID patients.

Bob Falcone:

So other than making sure there isn't something else going on and treating these people symptomatically and perhaps with some form of rehab, are there any drugs that are effective? Is there anything on horizon?

Dr. Joe Gastaldo:

There's really nothing on the horizon. A lot of it has to do with the fact that there's no clear definition of it, and we really don't have a clear understanding of a pathophysiology of post-COVID syndrome. Some of the things that are out there being talked about speculatively are things like the induction of some form of antibody or auto antibody, but it's really just supportive care at this time. And, of course, things like a good night's sleep, a well-balanced diet, increasing your activity as tolerated, and appropriate referrals when tolerated.

Bob Falcone:

Got it. So the prognosis is unclear, but you say a significant number of people get well?

Dr. Joe Gastaldo:

The prognosis is unclear. The vast majority of people do get well over time. But, again, we want to provide care to those patients in a compassionate way. I think a lot of it too has to do with the fact that physicians and patients get frustrated because we don't know a lot about it. I'm very happy to see that the CDC does acknowledge that. The CDC does now have video webinars on that. They've had two. And the NIH is actually doing a lot of research on post-COVID, and those seminars are available virtually online. There's two that have been recorded. One on the CDC, one of their Saturday calls, and then the NIH had two days worth of seminars on that in early December. And they're going to continue to study that. We owe that to our country and our patients. So I am happy to see that, at the federal level, they're putting their resources into studying it.

Bob Falcone:

From your previous comments, after 30 days, people are almost always not infectious anymore, is that a good assumption?

Dr. Joe Gastaldo:

The vast majority of people, when people have mild to moderate COVID, many studies have shown after 10 days from symptom onset, from being afebrile for more than 24 hours without being on antipyretics and with clinical improvement in their symptoms. They no longer shed live virus. That duration goes higher to 20 days for people with higher severity of illness or hospitalized patients.

Bob Falcone:

But by the time they're knee deep in post-COVID symptoms, they should no longer be infectious, so that's not a concern.

Dr. Joe Gastaldo:

That is correct. That is correct.

Bob Falcone:

When should they get vaccinated or should they?

Dr. Joe Gastaldo:

They shouldn't be vaccinated. And again, let's go through the official recommendations on somebody can be vaccinated in the setting of previously having COVID. And the CDC's wording on this initially was a little bit clunky. But what they initially said is that when somebody recovers from COVID, another infection is very unlikely and-

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Dr. Joe Gastaldo:

... from COVID. Another infection is very unlikely and uncommon within 90 days. So if somebody has previously had COVID, for 90 days, if they desire, they can choose to wait. The CDC changed that verbiage because a lot of people read that, and what they read was that if you previously had COVID, you shouldn't wait 90 days to get vaccinated. So they changed that around. I'm glad. The official ACIP recommendations on being vaccinated for someone who's had COVID is as follows. If somebody has had COVID, as long as they are out of isolation and they have clinically improved and recovered from COVID-19, they can choose to be vaccinated.

Dr. Joe Gastaldo:

Anecdotally, I could tell you from various things that I've heard and talked to him from other people who've had post COVID syndromes, there are some people who are reporting improvement in some of their post COVID symptoms. Specifically, I had somebody at Ohio Health who had COVID several months ago who still had persistent changes in their taste and smell. And about a week or two after being vaccinated with the first dose, that completely came back after suffering from that. I had somebody else reach out to me and say they really had a lot of fatigue and mental fogginess after having COVID four or five months ago. And after being vaccinated, the symptoms essentially melted away. Does that mean anything? I don't know. It needs to be studied, but again, it's a big area that we need more data on.

Bob Falcone:

Really fascinating. Sounds like this is an evolving diagnosis, and there's going to be more to come hopefully quickly, especially for all the primary care docs out there that are taking care of these patients and don't have any tools that they can pull out of their armamentarium. I think some of the suggestions you made are very good. Did we miss anything?

Dr. Joe Gastaldo:

No, I think the big thing is, again, we have an obligation to support our patients in a caring way, in a nonjudgmental way. Social media has really connected a lot of us. I know on Facebook, there is a long hauler support group, really full of thousands of people. And they share stories and they swap stories and this, that and the other. But when these patients come to you, I think a good philosophy or mindset to get into is to be transparent with them. And you know what, support each other and learn from each other. As an infectious disease doctor, we see people all the time where we don't have guidelines on, but you want to be transparent with them. And I think our job as a doctor to support them and obviously allow no harm to become upon them when it comes to prescribing medicines or doing unnecessary tests. But it's really something that we have to support our patients about, cover your bases and make appropriate referrals to providers who have a special interest in that area.

Bob Falcone:

Thank you, Dr. [Muscalla 00:38:53], that was great. Next we're going to be speaking with Laura Gravelin, who's an electrophysiologist at Mount Carmel, and the head of the women's heart program there. Laura, thanks for joining us.

Dr. Laura Gravelin:

Thanks so much for having me. Glad to be here.

Bob Falcone:

Well, as you know, I want to talk a little bit about COVID. Let's start with the COVID and the heart. What does it do to the heart? What does the acute illness do to the heart?

Dr. Laura Gravelin:

Yeah. So there are a number of different ways that COVID can affect the heart. Everybody knows about the spike protein on the outside of the virus. Well, that protein attaches to a certain receptor on the cardiomyocyte, the ACE2 receptor. That's also found in the lung, and so that's why we're seeing a lot of heart and lung symptoms from this virus. It can cause a direct toxicity where the cardiomyocytes themselves are damaged from the viral replication, but we also know there can be stress on the heart from hypoxia because of its effect on the lungs. And we're seeing a lot of thrombosis as well that can cause problems for the heart. There's some arrhythmias following infection, and that might be primary arrhythmias or related to cardiomyopathy or inflammation of the heart, mild carditis.

Bob Falcone:

Are these any different than other severe viral infections?

Dr. Laura Gravelin:

I do think that COVID is probably unique because of its affinity for this particular receptor that's found in the heart and the lungs.

Bob Falcone:

Interesting. Let's move onto what happens to them after they get well. And as we both know, the vast majority of people do get well. But they come back to you with persistent symptoms. What are you seeing?

Dr. Laura Gravelin:

Yeah. In the cardiology clinic, these long haul COVID patients or post-acute viral patients report shortness of breath, ongoing tachycardias, weakness, fatigue. Even in some instances, brain fog that can be debilitating.

Bob Falcone:

How are you evaluating them?

Dr. Laura Gravelin:

In our typical office visits, patients come in for an EKG. They'll get a physical exam along with their history. And then we decide whether or not additional imaging studies are warranted. We certainly try to rule out other comorbid conditions or de novo heart disease that could be causing their symptoms, but we're not quite sure in this post acute syndrome, is it ongoing viral activity that's causing the symptoms or an ongoing immune process that's causing the symptoms?

Bob Falcone:

And some of them can actually present to the ED as an MI, can't they?

Dr. Laura Gravelin:

Absolutely.

Bob Falcone:

Or proposed MI.

Dr. Laura Gravelin:

Yeah. That's a great point. We have had patients who come into the emergency department, who for all the world have an EKG that suggests they've either had an acute plaque rupture or thrombosis leading to 100% occlusion of their coronary arteries. They have big ST segment elevations on their EKGs, but when they go to the cardiac cath lab, their arteries are normal. So we are seeing signs of direct cell injury from this virus on the heart.

Bob Falcone:

And then of course you admit them and treat them as if they are a potential cardiac event.

Dr. Laura Gravelin:

Absolutely. There's certainly some amount of injury going on. Patients are admitted to the hospital where their symptoms can be managed. We monitor their hemodynamics. They maintain telemetry to look for arrhythmia. And then typically some sort of imaging to assess the ejection fraction of the heart, the pumping power of the heart.

Bob Falcone:

Once you've either ruled in a rule out significant disease that you would manage as you would manage any cardiac disease, what happens to these people? Do they get well?

Dr. Laura Gravelin:

No. So this is interesting. We're talking about an acute COVID infection presenting with relatively severe symptoms. Initially reported for these COVID long haulers was that maybe 10% of patients would have it. Then it was 30%. Now there's a Mediterranean cohort reported that it can be up to 50% have symptoms. So we follow them not only for their long haul COVID, but for the sequelae of their acute cardiac injury. And that can be arrhythmia or ongoing cardiomyopathy.

Bob Falcone:

So they might in the future come to some type of treatment or procedure for continued arrhythmia, for example.

Dr. Laura Gravelin:

Yes, that's quite right.

Bob Falcone:

Where does careful exercise and physical therapy come in?

Dr. Laura Gravelin:

Oh yeah, great question. Well, we certainly know that for patients who have had heart attacks, heart failures, that cardiac rehab reduces mortality. So we would certainly encourage patients to participate in that. And then in general, for any secondary or primary prevention of cardiovascular disease, we do recommend the American Heart Association guidelines that suggest we all get 150 minutes a week of moderate exercise, and we have a balanced diet. In particular, I recommend the Mediterranean diet, which is a basis of lots of fruits and vegetables, and when we do get our protein, they're lean sources of protein, like chicken and fish.

Bob Falcone:

Are you seeing a specific instance of gender or race or age in the people you are seeing, or is it spread?

Dr. Laura Gravelin:

Wonderful question. So it's reported that at least among long haul COVID patients, three out of four patients are women. And the why of that is not well understood. But I think the race question is profoundly important because we do know there's some disparity with this virus. We have to pay certainly attention to it so that we can make sure all patients get the care they need, but that's not been widely reported on yet.

Bob Falcone:

That's interesting. As you know better than I do, women present with a different symptomatology for cardiac events. Are you seeing that with your post COVID patients also

Dr. Laura Gravelin:

Yeah, that's an excellent point. The most common feature of heart disease is chest pain, true of women, but they also present with so many other symptoms like nausea, vomiting, pain in the arm and jaw. The COVID symptoms, I think so far have been fairly similar across genders. It's just that more women, three-fourths of long haulers are women, are experiencing them.

Bob Falcone:

How many of these people in your experience go on to be chronic versus a few weeks of unhappiness and then they get well? Do you have a feeling for that?

Dr. Laura Gravelin:

I have to say that the patients I've cared for have been rather fortunate. They're not permanently disabled in the sense that they can't return to work, but work is a struggle for many of them right now.

Bob Falcone:

And we haven't had it around long enough to know how long that's going to last, have we?

Dr. Laura Gravelin:

Yeah, I think that's an excellent point.

Bob Falcone:

Okay. Anything we missed?

Dr. Laura Gravelin:

I would like to take the opportunity to talk about maybe a long haul COVID outside its intended definition. We certainly know that the virus itself has been a bit of a long haul for folks. So in particular, the people that take care of patients, so not only physicians and nurses, but our phlebotomists and technologists, our transport team and our environmental services and nutritional team. At this year anniversary, people are certainly losing some resilience. So I'm just encouraging people who might feel a little tired and overwhelmed at this anniversary to make sure that they are seeking out help if they need it for their mental wellbeing.

Bob Falcone:

Sure. And in fact, some of those symptoms might be COVID long haul rather than the stress of a very stressful work environment.

Dr. Laura Gravelin:

Quite true. Depression and anxiety are indeed prevalent among our long haulers.

Bob Falcone:

Great. Dr. Gravelin, I want to thank you for your time, and look forward to meeting you in person one day.

Dr. Laura Gravelin:

It'll be my pleasure, Dr. Falcone. Thank you so much.

Bob Falcone:

So next I'd like to spend some time with Dr. Nathan Brummel. Dr. Brummel is an associate professor of medicine, critical care, pulmonary and sleep medicine at the Ohio State University Wexner Medical Center. In addition, he has a research interest in the critically ill and vulnerable patients who have sequela following their disease process. Dr. Brummel, welcome.

Dr. Nathan Brummel:

My pleasure to be here. Thanks for having me.

Bob Falcone:

Yep. So we're talking about COVID. Again, early on, most of us thought that it was a hospital problem and an intensive care problem. What were you seeing or what are you seeing in your critical care units?

Dr. Nathan Brummel:

Well of late the number of patients with COVID in our ICUs has decreased significantly, especially since the first part of the year when the major peak hit. But what we're learning is that those who survived, not only the ICU, but a hospital stay, and even those who weren't sick enough to come to the hospital are surviving with long-term symptoms. And I think that while this is a new syndrome, we've actually have a pretty large body of literature focused on long-term outcomes after sepsis, for example, that can inform us in how to help care for these post COVID patients, also known as the COVID long haulers as well, if you will.

Bob Falcone:

But the long haulers don't necessarily need to be in an intensive care unit. In fact, I suspect most of them have never been hospitalized.

Dr. Nathan Brummel:

That's correct. Only I think 1% of patients with COVID ended up in an intensive care unit, although it didn't really feel like that to myself and my colleagues at the time, and about 5% ended up in the hospital. So the majority of patients who were sick with COVID ended up not needing acute care hospital ICU services.

Bob Falcone:

When they're in the hospital in the critical care unit, COVID is different from other acute respiratory distress syndrome. How does it differ? Why does it act so weird?

Dr. Nathan Brummel:

Yeah. There was a lot of debate in the ICU community about whether this is ARDS, something that we've known for over 50 years, or if it's something different. I think where the dust is settled on that is that it is ARDS. Except what we're seeing clinically is it sure is most severe types of ARDS that we've seen. Patients stay severely hypoxic for a long time on average. We're looking at patients who typically are intubated sometimes as long as two or three weeks before we're able to either get them off of the breathing machine or it's safe enough to perform a tracheostomy.

Bob Falcone:

So when they do get sick, they stay sick. And when they come out, do they have persistent pulmonary dysfunction?

Dr. Nathan Brummel:

Yeah. We're seeing a couple of things. I think first is that the mortality from patients who end up on a ventilator is a little bit higher than we've seen typically with ARDS. Instead of the usual 30 to 40% with run of the mill ARDS, we're talking in the 50 to 60% range. So it's a lot higher mortality. The second is that when ARDS was initially described, there was this acute phase, but then a later phase of pulmonary fibrosis or scarring of the lung. And we're seeing a lot more of that. It had gone away over the last 15 or

20 years as we started to adopt better ventilation strategies. But when these patients are so sick for so long, it's very difficult to get them off the ventilator, and a lot of them do develop this chronic scarring, which is a combination of probably the severity of their underlying lung injury in combination with how difficult it is to ventilate some of these patients.

Bob Falcone:

And I suspect they respond at least a bit to pulmonary rehab and some of the things we do as outpatients for people with fibrosis.

Dr. Nathan Brummel:

Right. Yeah, we think so. I mean, we're still learning about whether this chronic fibrosis will heal itself or whether it is progressive or what. And my colleagues, Jeff Horowitz and Elliot Crowzer and I have a small grant to study some of this fibrosis in patients here at OSU. And you hit on a third thing of the rehab strategies. In critically ill patients, we still don't have any effective rehabilitation strategies in terms of improving physical function. People will regain about two-thirds of their ability to, say walk and have their cardiopulmonary fitness will improve over time, but after about a year or so that plateaus and doesn't tend to get any better over the long-term. And so it'll be interesting to see since we're still in the early stages of COVID survivorship, if COVID will demonstrate a similar picture.

Bob Falcone:

Yeah. I suspect that as these people age and their pulmonary reserve decreases, we're going to see a number of pulmonary cripples as a result of severe ARDS.

Dr. Nathan Brummel:

I think there will be yeah, long-term sequelae. This will affect hundreds of thousands of people across the country, and many more worldwide. We're working here at OSU and elsewhere around the country to understand better these problems and figure out ways that we can prevent them in the ICU and rehabilitate people afterwards.

Bob Falcone:

So let's talk about the patient who was never hospitalized, had a mild case of COVID or maybe a moderate case. Maybe they saw a doctor or didn't and they show up two, three, four, or five weeks later with persistent symptoms. What are we seeing?

Dr. Nathan Brummel:

Well, the major thing reported so far in the literature, and again, it's very case series essentially and we don't know a ton about it, but the primary symptom that folks are having is fatigue. In other words, they just can't get up and get going like they used to. Other folks note some what we call brain fog or some thinking and memory problems that have a-

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Dr. Nathan Brummel:

... called brain fog or some thinking and memory problems that have a range of severities. In addition to those physical problems that I alluded to earlier, the kind of just inability to exercise and carry out their

daily activities. So, we're still learning. I think these things exist on a continuum. Those that were the sickest for the longest will probably have more severe symptoms than those who were able to go through their COVID experience while they were still at home. But again, these exist. They're going to exist on a range and we still don't understand the duration of symptoms that people have, how long and how severe they will be. We're still learning from this.

Bob Falcone:

A number of these patients are going to show up at their primary care provider's office, and some of them will have shortness of breath and chest pain. How would you recommend working those patients up?

Dr. Nathan Brummel:

Sure. We're still trying to, again, optimize the right way to do this. But I think routine, good medical care workup of dyspnea starting perhaps with a chest x-ray to see if there are persistent infiltrates or something else that could be going on. The shortness of breath piece could be related to either persistent lung, or heart dysfunction, or general deconditioning from being sick. If you've got pneumonia and you were laid up in bed for a week or two, you would have shortness of breath that would last a while as well.

Dr. Nathan Brummel:

And we're still trying to tease out on a specialty standpoint from both a pulmonary and a cardiac standpoint, how much long lasting damage there really is. The patients anecdotally that I'm seeing in my clinic who have shortness of breath actually tend to have pretty normal pulmonary function tests. They have pulmonary infiltrates that do tend to get better over time. And so, I think close watching is advised at this point. There aren't any medical therapies, no steroids or anything like that that I think will be helpful at least in these early stages of their clinical recovery.

Bob Falcone:

So, if they have shortness of breath, it's often subjective rather than objective to [crosstalk 00:56:02]-

Dr. Nathan Brummel:

I think there's actually something, there's ... Right? Whenever someone presents with shortness of breath, we worry about heart lungs and overall conditioning. And so, I think working through the possibilities there are important.

Bob Falcone:

But if their chest x-ray is normal, their pulmonary functions are normal and their SATs are okay, we watch them?

Dr. Nathan Brummel:

I think I would ... Yeah, I would recommend watching patients as well as recommending resuming exercise. We have no reason to think that that is harmful at all in the recovery of these patients.

Bob Falcone:

And that's probably important to build up their stamina [crosstalk 00:56:42]-

Dr. Nathan Brummel:

... absolutely.

Bob Falcone:

... if you get sick, you lose your stamina pretty quick.

Dr. Nathan Brummel:

Absolutely. Yeah.

Bob Falcone:

Great. Any other things that we should be talking about?

Dr. Nathan Brummel:

I think there's a couple of other things. You may have already mentioned the mental health aspects of this, which we see patients present with symptoms that are similar to post-traumatic stress disorder. There's certainly a lot of anxiety. And I don't want to make a comment about how that is different from what we see traditionally in patients who haven't been this sick. So, if we look at PTSD, kind of the classic phenotype maybe, what comes to mind is a veteran who's concerned about a wartime experience. And the difference between what our acute and critical illness survivors are seeing, or what they face in terms of anxiety and post-traumatic stress disorder, is that as opposed to looking at something that happened in the past and being concerned about that happening again, they're actually worried about something happening in the future.

Dr. Nathan Brummel:

So every cough, every sneeze is a sign that, "Oh my gosh, I may be getting sick like I was when I had COVID again." And so, it's very difficult to manage those symptoms because they do differ from what I think many of us see in our daily practices. And what we are learning as part of larger collaboratives, such as the Society for Critical Care Medicine and my research group in the Critical Illness Brain Dysfunction and Survivorship Center is that support groups can actually be very helpful. In other words, groups of patients and family members who've been through similar experiences getting together and just sharing the experience.

Dr. Nathan Brummel:

One of the things that that happens to sepsis survivors is they get told, "You survived your illness, you survived being so sick, and now here you are, and you're all better." And we know that's not the case for the majority. And so, being able to be with the group of people who they can just talk and listen and share what life is like, after having been through an experience like the ICU, like a severe sepsis episode, like with COVID, is important.

Bob Falcone:

That's great. Thank you so much for your time.

Dr. Nathan Brummel:

Absolutely.

Bob Falcone:

Our next panelist is Dr. Kevin Johns. Dr. Johns is an Assistant Professor of Psychiatry at the Ohio State University Wexner Medical Center and a Co-Director of Integrative Medicine. Dr. Johns is particularly interested in the psychiatric dysfunction of chronic illness. Dr. Johns, welcome.

Dr. Kevin Johns:

Thank you for having me.

Bob Falcone:

As you know, we're talking about COVID. Let's start with the inpatients. What are you seeing with the COVID inpatients, whether they're seriously ill or moderately ill?

Dr. Kevin Johns:

Yeah. So, with the inpatient consults that we're seeing, unfortunately, there's a pretty wide range of neuropsychiatric sequelae that they're experiencing. Some of them unfortunately are developing pretty severe delirium or encephalopathy where they get really confused and might forget where they are, hallucinate, things like that. We've also had patients become catatonic. We've had some patients who developed other neurological issues like seizures or strokes as a complication of COVID in the hospital. And then on top of that, there's also just the psychological impact of being hospitalized with COVID and being isolated from all your friends and family.

Dr. Kevin Johns:

Unlike other illnesses, when people are hospitalized for COVID, they couldn't have any visitors, even the doctors and nurses had to gown up in PPE and protective gear to go in and see the patients. So, it's a very isolating experience. So, I think on top of the delirium and other neurological complications, there's also the psychological impact of the isolation and the fear of having a new disease that people are just learning about.

Bob Falcone:

Is the delirium different than the not uncommon ICU psychosis we see with seriously ill patients?

Dr. Kevin Johns:

I think it is. In my experience, the patients with delirium, they tend to take longer to kind of reboot or recover from that delirium. So, I've seen patients who are in the ICU with COVID and even long after their respiratory status is normalized and all their other COVID symptoms have gone away, the delirium is just really persistent and won't go away for a while. So, it tends to linger much longer than delirium from other causes, in my experience.

Bob Falcone:

How do you treat these people?

Dr. Kevin Johns:

So, the treatment is, similarly to other types of delirium, we try to correct the underlying medical problems, if possible. With many cases with these COVID patients, it's already being done. Their

respiratory status is already improving, but we try to look and see, are we missing anything? Is there a urinary tract infection or something else that could be contributing? We do a lot of environmental modification, making sure their sleep-wake cycle is normal, try not to disturb them at night, friendly familiar faces during the day. And then, there's also a role for medications as well and delirium. So, we do use medications to help with some of these symptoms too.

Bob Falcone:

Tell me about the strokes. Those sound unique to COVID.

Dr. Kevin Johns:

Yeah. Yeah. Unfortunately, many COVID patients have developed hypercoagulability syndromes and developed strokes. And that in itself can lead to lots of neuropsychiatric sequelae.

Bob Falcone:

I imagine. Let's switch to the people that are not hospitalized, but a week, two weeks, a month after they've had their COVID episode and recovered, they have continuing sequelae. What are you seeing there?

Dr. Kevin Johns:

So, we're seeing a pretty broad mix. A lot of things. Some patients develop kind of worsening of preexisting mental illness. So for example, if they already had depression or anxiety, after getting COVID, it can get worse. We're also seeing patients with new onset diagnoses after developing COVID. So, no previous history of depression, but then they get COVID and afterwards they develop a depression or anxiety disorder. Some patients can develop PTSD or PTSD-like symptoms from being cared for in the ICU and surviving a critical illness.

Dr. Kevin Johns:

We're also seeing quite a few patients who have these kind of cognitive complaints, where they feel like they just can't focus quite as well as they used to. Their memory is not as sharp. So, even after all the other symptoms have got away and they've gone back to work, they find that they just can't perform cognitively at the level that they used to. So, those are some of the things that we're seeing,

Bob Falcone:

I would assume that you treat depression like you would treat any depression, but tell me more about these cognitive dysfunctions. I've heard them called brain fog. What do you do for them?

Dr. Kevin Johns:

Yeah, it can be very, very devastating. It can be hard to diagnose, hard to catch. So, we try to screen these patients early on, and then we try to refer them to our neuropsychologists. We have a group of neuropsychologists here at Ohio State who are doing cognitive testing in patients who are recovering from COVID-19, and they're helping to develop individualized plans to help them recover cognitively.

Bob Falcone:

Kind of like brain rehab or occupational therapy, and some of the other modalities we use for other people with the same kind of symptoms?

Dr. Kevin Johns:

Yeah, exactly.

Bob Falcone:

Most of these people are cared for in primary care offices. When should the primary care physician be concerned about some of these psychiatric issues and when should they ask them to see a psychiatrist?

Dr. Kevin Johns:

That's a good question. Unfortunately, in the field of psychiatry, there is a huge shortage of psychiatrists in the community. So oftentimes, primary care, they are the first line of defense and referral can be really challenging, especially in more rural areas of the country. So, that being said, I think anytime that the symptoms fail to respond to therapies that the primary care provider is comfortable with using ... For example, common antidepressants. If there's concerning symptoms, like concerns for mania, or suicidal ideation, self-harm, these kinds of things, it would be a good idea for the patient to be referred to a higher level of care.

Bob Falcone:

That makes complete sense. So, if they're comfortable with antidepressants and the patient's depressed, that seems to be reasonable. If they have opportunity to send people to occupational therapy or neuropsychiatric cognitive evaluation therapy, then that's probably a good bet for some of those symptoms. How about people that are just ... Have continued lassitude and fatigue and weakness, is any of that psychiatric overlay, or is that more physical?

Dr. Kevin Johns:

I think anytime with these ... In patients with chronic illnesses with difficult to explain symptoms, that optimizing their mental health is a critical part of their recovery. Similar to, for example, patients with fibromyalgia or chronic fatigue syndrome, having a robust mechanism in place to screen for things like depression, anxiety, substance use, things that could be contributing to these symptoms, is really important. And having a way to get the patients to treatment.

Bob Falcone:

So, it sounds like things that most family doctors are doing now, they're treating the whole patient and making sure that everything is good as it can get before they get down and dirty on the psychiatric issues. Does that sound about right?

Dr. Kevin Johns:

Yeah. Yeah. Depression, anxiety, they can basically worsen outcomes in virtually any illness that they're paired up with. So, anytime that you have these chronic illnesses, whether it's things like fibromyalgia or diabetes, optimizing depression is always going to be something that could go a long way in helping the patient recover, especially when it's something where there's not a quick treatment to cure the illness or make it go away.

Bob Falcone:

In your experience, do most of these people get better? And if so, how long does it take?

Dr. Kevin Johns:

That's a good question. I think it's probably a little too early to tell right now. I think that story is still being written as we speak. I would expect that some of these people will get better. My concern is that some of these patients may develop more long-term symptoms and there's going to be a lot more research coming down the pipeline to figure out how to help these people.

Bob Falcone:

Well, this has been great. Is there anything we've missed?

Dr. Kevin Johns:

I think I would just echo that the most important thing at this point is to take a wholistic approach, treat the whole patient, like you said. Here at Ohio State, whenever a patient is discharged from the hospital after being diagnosed with COVID-19, we have a transition of care group that reaches out to the patient and they'll screen the patient for depression, anxiety.

Dr. Kevin Johns:

And then if they screen positive, we can enroll them into a collaborative care program where the internal medicine doctor can collaborate with a psychiatrist and a social work care manager to treat the patient in a team-based approach. So, having creative ways to screen and rapidly identify the psychiatric symptoms in patients with COVID-19 or recovering from COVID-19, I think is going to be really important in the long run.

Bob Falcone:

Great. This has been really informative. Thank you for your time.

Dr. Kevin Johns:

Thank you.

Bob Falcone:

Well, there you have it. It sounds like patients with long haul COVID symptoms should be treated seriously, evaluated and treated as appropriate for their signs and symptoms, and when appropriate, they should be evaluated for physical, occupational and brain rehab. Of course, they should have good nutrition, adequate sleep, and exercise helps. The benefits of joining the Affinity Group cannot be overstated. Thanks to our expert panel, Dr. Arthur Palmer, Alexa Mira, Joe [Gastaldo 01:09:45], Laura [Gravlin 01:09:47], Nathan Brummel and Kevin Johns. If you have any questions, please feel free to email me or the panel. Or better yet, post them on the loop so others can see them. On behalf of the CMA, this is Bob [Falcone 01:10:00]. Until next time.

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