

Dr. Comilla Sasson:

Today we have Dr. Michael Sayre and Dr. Tom Rea. Can you both tell us what your current roles are?

Dr. Thomas D. Rea:

Comilla, I'm the Medical Director for King County EMS, which provides direction for county fire departments and 911 responders outside of the city of Seattle. That's about 2000, 2500 EMTs and about 180 paramedics.

Michael Sayre:

I'm Michael Sayre and I'm the EMS Medical Director for the city of Seattle, and we have about a thousand EMTs and approximately 75 paramedics.

Dr. Comilla Sasson:

Excellent, and I know all of us had been watching across the country over the course of the last eight weeks as we've been seeing all of these things happening in the state of Washington. Can you, Michael, just start from your perspective about what happened? I think we've seen a lot of news reports and I think it'd be amazing to just hear kind of from your perspective how did you first know something was happening and maybe that this was something different.

Michael Sayre:

The way I found out about this... and I'm going to quickly give this question to Dr. Rea... was I got a text message or a phone call from the Seattle Fire Chief that he had heard that there was a person who had died of COVID-19 and did I know about that, and I didn't. So I quickly handed that football off to Dr. Rea and asked him if he knew anything about it, and I'll let Tom tell the story because this was a nursing facility that is in his jurisdiction.

Dr. Thomas D. Rea:

Thanks, Dr. Sayre. So we learned this testing was done when the CDC criteria for testing for COVID-19 to include patients who had unexplained and severe respiratory illness. So the hospital that serves that part of the region, their critical care team and infection control group went ahead and sent that test off to the CDC and, lo and behold, a couple of those tests came back positive that evening of February 28th. So that information was communicated to myself, and then we quickly convened with the fire department and paramedic group and began to do our homework overnight on February 28th into February 29th. So that's, I think, how we first learned of this and very fortunately, the hospital reached out to EMS and we were able, in the moment, react and identify all calls that had gone into that facility initially for the last two weeks. Then we expanded that to the beginning of the month, beginning of February, to understand who might've been exposed and take action to keep those folks safe and their colleagues safe.

Dr. Comilla Sasson:

I know, Tom, you have a background in epidemiology. So when you hear... and both of you obviously in public health. When you first hear a cluster is identified at this nursing home facility, what goes through your head?

Dr. Thomas D. Rea:

Well, again, I think we had some leeway because we understood some of the biology of the COVID-19 virus and its incubation period and its onset of symptoms and its infectious nature. So we were able to sort of incorporate that in the understanding, how to track exposure and how to quarantine. Very fortunately, we have our CDC and we have our public health colleagues. We are blessed to

have infectious disease experts in the region, and all of them have really worked well together to provide us guidance and input as we seek to keep EMS involved and safe.

Dr. Comilla Sasson:

When you had to communicate this information to your EMS providers, can you talk a little bit about what that strategy was in terms of helping them understand that they had been exposed potentially to a person who had had COVID-19 but then also what that meant for them and the other folks that they had taken care of or even their families and sort of that spread that we know is so important?

Dr. Thomas D. Rea:

I'll start, and Michael's clearly taken the lead in doing a wonderful job of communicating to the other EMS leadership around the country. So early on, we work with CDC and public health to make sure we crafted responsible strategies to manage exposure and quarantine and then if patients or persons developed symptoms, isolation. I would say, we look to the experts to help inform those guidelines, and then we turned around and did public facing presentations to our paramedics and EMT providers through conference call, through educational forums that we have routinely, and have kept that on the front burner. Michael, you want to comment on all the activities you've undertaken on this front?

Michael Sayre:

Sure. So within the Seattle system, we quickly scrambled to create some guidelines for our teams in terms of workplace exposure and to try to mitigate the exposure. We realized that we needed to retrain and refit test the entire workforce. Fortunately, they had all been fit tested, so mostly it was just a refresher, but we retrained everybody in PPE. We knew that that would use some of our PPE supplies, but we felt like it was very important to do that to the extent that we could in order to make sure that we minimized exposures to our workers.

Michael Sayre:

We went through daily Skype calls with the all of the on-duty teams. So we had those four days in a row with the whole leadership and we took questions. So we began to develop a sense for what people were really worried about, and what emerged was they wanted to know that if they couldn't work that they were going to be made financially whole. That was a big concern. They wanted to know if they had been exposed and went home, were they going to be exposing their families.

Michael Sayre:

We had to learn how to message about the differences between quarantine and isolation. Since our workforce is fit tested, we offer the opportunity for them to take home a N95 mask, because they already use them at work, if they would like. So people can use that to feel a little more secure at home. We went through sort of a phase of convincing folks that they were much better off being at home in quarantine than they were being in a group at a fire station in quarantine. There are a few people that maybe don't have great options, but in general, people are much better off being at home if they're in quarantine than somewhere else.

Dr. Thomas D. Rea:

Camilla, I think Michael makes excellent points across the board. If groups, EMS, or hospitals are thinking about how can we get prepared, we continue to have a daily call with leadership from around the county and new scenarios, new questions arise every day, and we update information in that. So I think people should establish this network. It may sound like you have it on paper, but I

would test it and refine it here in the days to come before you actually may really, really need it. That network is really important.

Dr. Thomas D. Rea:

I think the other thing that we've done, we're a complex metropolitan system with dozens of fire departments. So each fire department has appointed a health officer for this particular issue. Some of them have more than one, but I think it's really important that there is a point person who will take responsibility and be accountable to help guide an agency, to be the point person if there's questions that come forward for medical leadership, that person knows that they have that charge to communicate and to advocate for their department or their agency.

Dr. Thomas D. Rea:

I think the other lesson learned here is what Dr. Sayre commented on or at least alluded to was the front and center involvement of medical direction for their EMS providers, physicians, and other Allied health professionals who help advise really need to be at the table and engaged and willing to go that extra mile to help address concerns and anxiety among their workforce.

Michael Sayre:

I'll add one more kind of communication opportunity. That is to be directly engaged with the health department, so whatever that local health jurisdiction is. If it's at the county level, I think both Dr. Rea and I have found that to be quite helpful. Now these I think both Dr. Rea and I have found that to be quite helpful. Now with social distancing, these are mostly, again, daily calls via Skype or Zoom. So being able to raise issues and concerns in that forum and also understand what their plans are and what the current hotspots are has been pretty useful. EMS is not as impacted by some of this as hospitals are, but other elements, maybe we have some leading indicators that can help the public health authorities understand what's happening on the ground.

Dr. Thomas D. Rea:

Yeah, Comilla. If you're not inserted with your public health department or jurisdiction, you need to establish that relationship and insist that you be at least have access to the discussions that will go on, on a regular basis. Be part of the email chat group and the postings because it really becomes critical and their decisions have implications for EMS.

Michael Sayre:

One more point on this is that both of us are in this loop. Hopefully neither one of us gets sick, but if it happens, there's a redundancy feature.

Dr. Comilla Sasson:

Well, and I think that's I think you had also mentioned too the importance of adding fire. Have you guys also connected? I would guess with the mayor's office and police as well, because they're obviously part of the first responder team?

Michael Sayre:

So I'll take the lead on that. I think that was something in the first days of the event, maybe we didn't do as good a job as we wish we had on connecting with law enforcement and I think we've mostly done a much better job in the last week on helping them. I don't think we've solved that problem, but we've improved that relationship and brought them into our fold, making sure that they are on this a

daily call with the EMS chiefs, so they have the opportunity to raise their issues and hear the discussion as well. We've established in Seattle that they basically have the same sorts of access to testing, the same screening process as the fire and EMS do.

Dr. Thomas D. Rea:

I echo Michael's comments and the other group that's obviously integral here is batch. Right? So they have been very important partners in letter callers to understand when there might be a potential risk and relaying that on to the EMS responding crews who then need to exercise their own set of judgments as they approach a scene in a patient. But the dispatches on these calls, really, they've been important partners.

Dr. Comilla Sasson:

Back to when you had folks on quarantine, how did you handle that from a workforce perspective? Because obviously that has some pretty major implications considering how many folks maybe are put into a quarantine, who may be asymptomatic at this point, then of course the ones that will become symptomatic and have to go into isolation?

Dr. Thomas D. Rea:

So I'll start and then Dr. Sayre can you add. So we've had a couple of fire departments who were exceptionally impacted at the outset, right? Because they had unknowingly had these exposures that likely went on for days and weeks, as we now appreciate. So it caused a real and palpable challenge for them to staff and to provide the high level of service that they are accustomed to doing. I will say that they found a way to do this but that we actively considered contingency plans for how to manage if we had shortfall in staff. So I'm pleased to say we haven't had to use these contingency plans, but it is something that we are sort of actively thinking about and planning for it. I don't know, Michael, other comments?

Michael Sayre:

Well, I think the preferred mode is that these folks are quarantined at home so they aren't running the risk of exposing their colleagues to the disease should they have the misfortune to actually become infected. To the extent that your workforce allows that to happen, I'd say that's the preferred method. But like some of the hospitals in the area, including the one I work at, they can't afford to have that many people at home. There's so many that got exposed early on before we recognized what was happening, that the workforce would have a lot of people at home. So people had been working while they've been in quarantine status because we have to do that right now at some of the hospitals. But if you don't have to, I would suggest people stay home.

Dr. Comilla Sasson:

What's the contingency plans that you guys are working through right now? Because I know that's an issue even here in Colorado for us, as we started thinking about our frontline providers who, either now are finding that they are symptomatic and symptomatic, obviously can you know something as mild as cough, cold kind of symptoms. But it's hard to tease that out in the absence of testing. So what are you guys doing from a contingency planning perspective?

Michael Sayre:

So I'll take that first and then Tom can weigh in. So we've implemented a symptom tracking system. So for people who are in quarantine status, they go and they fill out a red cap form twice a day and record any symptoms that they have. Then if they turn positive, they get moved into an isolation status, and hopefully get tested. If they develop symptoms, I mean. So for people who don't have

known exposures and become symptomatic, they may sort of self identify and then they would enter that system potentially as well and be in isolation status and get tested.

Michael Sayre:

Then recently, we've implemented a strategy where every day when people show up to work, they get their temperature checked, and they are asked if they have any symptoms and then they're basically turned away at the door. So for the few people that maybe didn't realize that they really couldn't work, we try to catch them then, so that they don't infect their colleagues. If we have so many people out sick, the fire department has a pandemic plan, about how they are going to manage this. It's quite detailed depending on the degree of involvement of the workforce. They'll basically start reducing staffing within the fire service if they have to. It just depends how many people get sick.

Dr. Thomas D. Rea:

Yeah. Comilla, it's Tom, very similar in greater King County. That strategy, Michael laid out is comparable in the rest of King County. We've, I think, been in lockstep on all these items and that's very important to have sort of a regional approach. I think that's another lesson learned and it's something we practice from the get go to work together. There's a lot more good ideas and energy and progress that can be made when you sort of share across jurisdictions. That's certainly something that the Seattle and King County has done in this instance.

Dr. Thomas D. Rea:

Yeah, there's endemic plan, if things get critical we will have to make some hard decisions, and Michael highlighted some of the decisions that some healthcare institutions that made having folks work even though they've been exposed who are asymptomatic, right? But right now we haven't done that with the EMS, and our goal is, again, to try to quarantine those people with a known exposure.

Dr. Comilla Sasson:

So two questions to follow up for those. So you guys have made some of these things that you're doing available, right? For community members, and for other EMS chiefs maybe, or folks that are interested online. Is this all available somewhere for them to be able to get to some of the REDCap surveys for example that you guys are doing and some of the protocols you all are using?

Dr. Thomas D. Rea:

I'll start it and Michael can add. Folks need to understand that every system is different and their structures and operations may dictate what's feasible. We have those limitations in our system, and so we've had to be practical to understand what we can implement.

Dr. Thomas D. Rea:

We use a web-based learning system called EMS Online, and we posted many of these materials to the public facing part of that website. Folks certainly are welcome to review that. It's a work in progress. I will tell you many of the items get changed on a daily or a weekly basis, but there are some resources there. Just the grain of salt is, you need to understand how your system may or may not be relevant to some of the recommendations and practices that are ongoing.

Michael Sayre:

Then in terms of the REDCap piece, we are willing to share, although some of this is really evolving rapidly. So like Tom just said, it's a little different every day.

Dr. Comilla Sasson:

I think that's the thing that all of us are living in right now is a lot of uncertainty and knowing that what we know today or even this hour might change in the next hour when the next advisory comes out. But I do think having those resources available, even just if they're simple things like, what are the questions that I should be asking? When should I switch somebody from quarantine to isolation status?

Dr. Comilla Sasson:

Those are I think, helpful for us as we're all trying to learn on the fly, if you will. The other just follow-up quick question on the hospital piece. You had mentioned that you guys are taking the temperatures of folks when they come in. Are you just having greeters at the door when folks come in and do an infrared temperature checks, or how are you guys actually just operationalizing that?

Michael Sayre:

When I was talking about temperature checks, I meant for firefighters and EMS workers who show up for work. The hospital, I think it varies by the hospital exactly how that's being approached. At Harborview at the county hospital, they are just beginning to implement a plan like that. They've locked the building down. You have to have a badge to get in. If you come in as a patient, you can only bring one visitor with you, and in the like, and they ask about symptoms. I'm not clear when they plan to start temperature checks, although I know Tom has at least one hospital in his jurisdiction that has started that.

Dr. Comilla Sasson:

Are those same provisions are also going out to any of the folks that are working directly with other patients in external facilities like nursing homes and assisted living facilities?

Dr. Thomas D. Rea:

I'll just comment that obviously in our region, and I think there are now some signals coming from other parts of the country that everyone can be affected by the illness, but certainly older persons and persons with comorbidities really take the heaviest clinical toll. Certainly the skilled nursing facilities are a high-risk location in part because of the proximity of folks, and then also because of the clinical profile of the residents that live there. So there has been an incredible effort by public health, the CDC, the Washington Department of Health, to rally and bring people up to the highest standards of practice by educating and helping to provide PPE. Right?

Dr. Thomas D. Rea:

I think that's a topic that's important as well, and the supply of PPE, and contingencies to manage that approach, and how can we get smart and be as efficient as possible while also providing protection to patients and employees. So there's been a concerted effort to reach out to the skilled nursing facilities, and train, and educate, and help support, understanding that they are a high-risk location where there's substantial consequence to infection.

Michael Sayre:

Many of them have also started these symptom checks. It's one of the new state rules that they have to do symptom checks, limit visitors and check temperatures.

Dr. Comilla Sasson:

Excellent. I think that's a huge point for a lot of us because I'm not sure if everyone is doing that consistently across the U.S. right now. I will say, Tom, you had mentioned PPE, and I think that's

something that we're hearing a lot about, especially right now, both in the news, and then also as a provider myself, and in many smaller forums as well. How have you been managing the PPE issue, and can you talk about how that's even changed since February 28th?

Dr. Thomas D. Rea:

Well, this is a real challenge, right? I mean you're between a rock and a hard place. I think we want to keep people protected, and guidance from the CDC highlights a particular approach, understanding that there needs to be flexibility given the challenges to supply for PPE. So we want to be proactive and have folks protect themselves, but we also appreciate that the near-term horizon is we are not going to have PPE forever.

Dr. Thomas D. Rea:

So we every day talk, and think, and try to manage. To the extent possible, we're trying to follow the CDC guide. But again, this is a moving target, and every system is going to have to understand supply and demand, and prioritize their approach. So I think you would probably get a different answer from us tomorrow. I'll stop there. I'll let Michael reflect a little bit on this.

Michael Sayre:

Well, I think some EMS workers of course need to be cognizant of the risks here, and we're trying to create some kind of balance, paying very careful attention to how much PPE gets used. Having people understand that there probably isn't going to be a big resupply any time soon, and therefore we need to do what we can to preserve our PPE. Then also helping them understand that particularly the skilled nursing facilities have an even greater need.

Michael Sayre:

They have an even higher risk group of patients, and they have even less PPE supplies than hospitals or EMS. So I just also want to really recognize the staff at those facilities, especially the one that went first. I mean, those people kept coming to work. They knew that they had this disease in their facility and that many of them were getting it, and yet they kept showing up every day and taking care of those patients.

Dr. Thomas D. Rea:

Yeah.

Dr. Thomas D. Rea:

I don't think that last part can be understated, right? I think there are a lot of people who worked really hard and quietly, and sacrificed a lot to try to help here. In many parts it's that Life Care Center in Kirkland, those employees really are heroes as are the EMS providers who stepped in, in that hospital, in that region, Evergreen Hospital. Those folks have really leaned in and done their very best in a very challenging situation. Everyone is trying really hard.

Dr. Comilla Sasson:

What do you think have been the biggest lessons learned? I mean you've got an audience that maybe is 7 to 14 days away from where you are right now in Seattle in greater King County. What are things either you wish you had known back then or maybe even had considered doing differently?

Dr. Thomas D. Rea:

I'll start and again I think hindsight is always challenging. Certainly testing is key here. I think the ability to access testing, which I think is coming online at an increasing pace will be very important for folks to understand. Then I think just being personally responsible in terms of personal hygiene or hand washing and then this social distancing plan. I think the models indicate that we have to do this, otherwise we're going to overwhelm the health resources we have. It'll just come and it'll be a tidal wave. So I think everyone needs to take that seriously as we move forward. Michael, what are your thoughts?

Michael Sayre:

Yeah, I'd echo that. I think for the EMS workforce, they are taking this seriously in our area and I'm afraid that some people will still get the disease either because of work exposures or exposures outside of work. For the reasons of the country that don't have as much disease yet, it's so important if you can to test and then quarantine the close contacts and try to get ahead of this. There's a lot more disease out there than we've been able to test for, but that's not maybe true everywhere. So to the extent that places can be able to test and then isolate and quarantine and mitigate that spread in addition to a lot of social distancing right now. Otherwise the hospitals, they're just going to get flooded and the whole system could collapse.

Dr. Comilla Sasson:

I think there's a perception out there that this maybe won't be that bad or maybe just won't be that long. What are your thoughts right now as you're looking forward into the next two to four weeks? What are your thoughts as you're looking ahead?

Michael Sayre:

So I'll start this. I know that there's some local disease modeling experts that did a report that suggests that we're certainly going to continue to see a rise in cases here locally, at least through the first week of April. Although it's a model, so there's a lot of uncertainty about that. The hospitals are all preparing, like that's going to be true and there's going to be a large rise in the number of patients who get sick. It takes a long time from when they get infected until they get critically ill, like 10 to 20 days. So some of these cases are beginning now and they're not going to be in the ICU for another week. So the delay here is a real major concern. We'll have to see what happens after April 7th.

Dr. Thomas D. Rea:

Yeah, I think Camilla, that the juxtaposition is you hear these reports that well there's only a 2% mortality rate and only a fraction, 20% even need to go to the hospital. Most people do fine and so some people walk away with that and feel good about it. But I think if you apply those proportions to the population, it really becomes overwhelming to think about the number of people that may become acutely ill or critically ill and the number of people that will die from this. So I mean, we go from quickly into the tens of thousands of people that will have critical illness. When you begin to think about the absolute numbers, we need to understand that the small fraction translates to very large absolute numbers that can really overwhelm a health system pretty quickly.

Dr. Comilla Sasson:

I think I've heard both of you say this before, but unless drastic measures are taken, there is the possibility that this could become worse as we've heard the NIH say and even the CDC say, before it gets better.



Dr. Thomas D. Rea:

Yeah. Michael alluded to those models which are helpful and again, if we don't do anything, we're headed for disaster. I think that's true, but the opportunity is here and we as a collective need to be responsible and be accountable and practice all the best ideas that have been advocated by health leaders. If we do that, the effects are remarkable and substantial and I think then we have a good chance to stay out in front and to manage a very difficult situation.

Dr. Comilla Sasson:

Michael, any other final thoughts from you as well?

Michael Sayre:

No, I think I'm confident most places are preparing and I hope that they realize that they can do quite a bit to mitigate the damage and the harm that can result by taking action now and not waiting.

Dr. Comilla Sasson:

All right, well thank you both so very much. I know you are so extremely busy and just even taking a few minutes out of your day to provide this perspective I think is going to be so helpful for so many people. So stay safe. Thank you for everything that you both are doing as well as all of the folks in Washington state. I know that we are learning so much from you and we really appreciate all of the collaboration that you have been willing to give us in terms of also just helping to get some of these hard fought lessons that you guys are learning right now out to really the general audience that is hungry for this information. So thank you.

Dr. Thomas D. Rea:

Sure.

Michael Sayre:

Thank you, Camilla.

Dr. Thomas D. Rea:

Thank you.