

TPWKY

This is Exactly Right.

Andrew

My name is Andrew, I live in Pennsylvania, and I've been a registered nurse for about 4 1/2 years. I work on a respiratory-focused ICU and shortly after the pandemic hit, we became the designated COVID unit for the hospital. We saw many patients but one question always hovered in our minds. Why do some people get it worse than others? This was never more poignant than when we had a husband and wife couple on our floor. Each patient on my unit has a single room with no roommate but we had these two patients visit each other for as long as possible every day, coordinating with respiratory physical therapy, our technical partners, and our doctors to make it happen.

Their status ebbed and flowed for quite a while but eventually on one really tough day for the staff and obviously the patients, a decision was made to put the husband on what we call comfort measures only, where we switch our goal from treating the disease to treating the symptoms and making the patient comfortable. And we removed the high-flow oxygen that was keeping him alive. His wife was wheeled into his room, hooked up to her own high-flow oxygen the whole time, and she held his hand while he passed.

She survived and transferred out of our unit a while later. On a day previously where I had been taking care of her, she had told me that the only thing she wanted was for both of them to have the same outcome, either both live or both die. And COVID decided differently.

Heather

My name is Heather, I work in theater and film and TV as a costume designer and assistant costume designer in New York and across the country. Or I did. Every single arts job I know of stopped due to COVID. New York is an expensive place to live. I personally had to leave and move my whole life into a storage unit. I am lucky and am able to live with friends in D.C. Everyone I work with is suffering. Many, many of my friends and coworkers got sick very early in the pandemic. Some were told not to get tested because there were not enough tests.

Everyone has been watching their bank accounts drain with very little possible work on the horizon. Recently some work has restarted in TV and film, however it's not enough work for everyone to get back at it, not to mention that TV and film is an incredibly exhausting experience at its best of times. And now with limited contact with coworkers, isolated lunch hours, and pod work groups, much of the joys of the job are gone. All socializing and most of the collaboration, the heart of arts work, has been restricted. It's also not a guaranteed safe space. You don't have a lot of space between you and 500 background actors. It's not just your personal health you have to worry about, it's your family and your neighbors. It's a dense city that takes its civic duties seriously. No one wants to be part of the spread, but how can we earn our rent money?

Theater, my primary source of work, is still completely gone. Broadway is dark. All of the beautiful and kind people I work with onstage and backstage are living on pennies and hoping for some kind of magic to restore our safest and most sacred space. The arts are a local, national, and international community about coming together and telling the truth. Whether it's funny, serious, scary, or satirical, bearing witness to someone's truth is essential to our human condition.

How much TV have you binged? How much music have you listened to? How much has it helped to soothe your anxiety and lift you out of your depression? Not just during this pandemic but always. The arts affects you everyday. We wanna come back. Often our industry is painted as worthless. However, Winston Churchill himself said when asked if he should cut arts funding during WWII: "If we cut the arts, then what are we fighting for?" We wanna work, we wanna do it safely, for ourselves, our loved ones, and our local and global communities. Thank you.

TPWKY

(This Podcast Will Kill You intro theme)

Erin Welsh

Hi! I'm Erin Welsh.

Erin Allmann Updyke

And I'm Erin Allmann Updyke.

Erin Welsh

And this is This Podcast Will Kill You.

Erin Allmann Updyke

Yay! Welcome back to our Anatomy of a Pandemic series!

Erin Welsh

Yes. It has been nearly nine months. Is that right? Since we first did that big drop of episodes.

Erin Allmann Updyke

Wow, yeah. A lot has happened in that time period.

Erin Welsh

So much.

Erin Allmann Updyke

So we thought that, for a number of different reasons, it's about time for an update.

Erin Welsh

Yeah. So I think reason number one is that we've learned so much more about SARS-CoV-2, the disease that it causes, how it's transmitted, and the steps that we have or have not taken that seem to best control its spread.

Erin Allmann Updyke

Yeah. The second reason is that right now especially, cases are enormously and terrifyingly on the rise.

Erin Welsh

Yes they are. And the third reason is that the mistrust in science and the disinformation that has been spread by the Trump administration and some other elected officials has already done unfathomable damage. And so, you know, let's inject a bit of rational science-based thinking back into our lives.

Erin Allmann Updyke

Let's do that, I think that sounds really great, Erin.

Erin Welsh

Yeah, yeah.

Erin Allmann Updyke

For this new batch of episodes we'll be revisiting some of the topics that we covered earlier this year including aspects of the disease, virology, the epidemiological characteristics, and of course the one that everyone wants to know about, vaccines.

Erin Welsh

Yes, the vaccines. But we wanna get these episodes to you as fast as we can get them ready, which means that the schedule for the release might look a bit wonky. So definitely subscribe to us through your podcast app and on social media to see when we drop a new episode.

Erin Allmann Updyke

Exactly. You don't wanna miss anything. And if there are additional aspects that you'd like to see us cover or particular questions that you have, feel free to send them to our email [thispodcastwillkillyou@gmail.com](mailto:thispodcastwillkillyou@gmail.com) or through the 'Contact Us' form on our website, [thispodcastwillkillyou.com](http://thispodcastwillkillyou.com).

Erin Welsh  
And of course we are still soliciting firsthand accounts for these episodes. So if you would like to share your story, please head to our website and click on the 'COVID-19 Firsthand' tab which will take you to a Google Form that you can fill out. And also a huge thank you to everyone who has already filled out this form and shared your stories with us, we are honored to get to read them or hear them and wish that we could share every single one.

Erin Allmann Updyke  
Yeah. As with our earlier Anatomy of a Pandemic series, these episodes are not going to replace our normal season episodes which will still be coming out every other Tuesday, like they always do. And on those episodes we'll be keeping the COVID talk to a minimum as much as we can because we know that sometimes an escape from the COVID reality is necessary for our collective mental health.

Erin Welsh  
Absolutely. So, okay, now onto the important bits. Erin, what are we drinking this episode?

Erin Allmann Updyke  
Well of course we're drinking Quarantini 12!

Erin Welsh  
(laughs) Such a descriptive name, I love it.

Erin Allmann Updyke  
Such clever quarantini names for these COVID episodes.

Erin Welsh  
I mean, I'm actually secretly very glad that we did not decide to get super punny and creative.

Erin Allmann Updyke  
We would've had to stop making episodes, quite honestly. (laughs)

Erin Welsh  
Yeah, for sure. (laughs) So what is in the Quarantini 12?

Erin Allmann Updyke  
It's basically a Campari Spritz.

Erin Welsh  
Ah, so good. I mean you could use Aperol if you prefer, I like the bitterness of Campari.

Erin Allmann Updyke  
Awesome. Me too. Plus I happen to have it and I don't have Aperol.

Erin Welsh  
Yeah I feel like I use Campari much more in other drinks as well, so I always have Campari, I rarely have Aperol. Anyway.

Erin Allmann Updyke  
Yeah. Yep. Exactly. Anyways.

Erin Welsh  
So onto what we are covering this episode.

Erin Allmann Updyke  
Yeah.

Erin Welsh  
This episode we're talking all about control, as in how do we control the spread of this virus? But most of that we already know and we have known it since the beginning of this pandemic. So what we really wanted to get at in this episode is what we have learned works and what maybe doesn't work as well as we thought or isn't as important nine months into this thing.

Because we learned a heck of a lot and some of that knowledge, like the benefits of wearing masks both for those around the mask-wearer as well as the mask-wearer themselves, has played a large role in the shifting guidelines that we've seen from public health departments. Controlling the spread of this virus takes action at both the individual as well as the regional or community level. And so in this episode we wanted to examine both what we can do to protect ourselves and those around us from this disease as well as understand why certain restrictions are being put into place as this pandemic surges.

Erin Allmann Updyke

Yeah. For this episode we were so lucky to chat with Dr. Saskia Popescu who answered our many, many questions about control and also she was just a phenomenally fun person to get to chat with and interview.

Erin Welsh

Oh my gosh, it was like such a fun... It was such a great like, 'This is such a great start to our Friday!' It was wonderful, I loved it.

Erin Allmann Updyke

I know! And also she mentioned a zoom happy hour and I'm really jealous that we're not invited, but anyways so...

Erin Welsh

Yeah, anyways.

Erin Allmann Updyke

We recorded this interview on Friday, December 4th so keep that in mind whenever we're talking numbers. Okay. we will let her introduce herself and dive into the interview right after this break.

TPWKY

(transition theme)

Saskia Popescu

So my name is Saskia Posecu, I'm an infectious disease epidemiologist, an infection preventionist, and I am an assistant professor of biodefense at George Mason University.

Erin Allmann Updyke

Awesome. Excellent. So our first question for you is kind of... We're now, what, over eight months I think into this pandemic. And we've learned a lot about different control measures for preventing the spread of this virus like mask-wearing, that indoor dining needs to be restricted, contact tracing, all these different things. So we wanted to first talk to you about the policies at the regional or statewide level that seem to actually be the most effective at reducing transmission. What have we seen so far that really works?

Saskia Popescu

Well, we've seen in several states that widespread mask mandates have actually made a considerable difference, but those have also really come with concerted efforts to emphasize distancing, reduce the number of people indoors, and provide more accessible testing. So on a national level though, I think there's been more attention for the CDC on masking, more recently they emphasized that it does protect the person wearing it and not just those around you. But also on limiting gatherings. So if you look at California, they have a rule about not gathering beyond 10 people but I think what we've really learned in all of this is that there's no single strategy.

Really we have to take communication above and beyond and focus on risk reduction being additive, that Swiss cheese approach because early on we noticed that when we were six feet, people really got stuck on that nuanced thing and they thought beyond six feet, if you were at six feet and two inches it was this almost invisible force field. So we really learned a lot about communication in that and you'll see that a bit reflected in the policies.

But then the truth is it's so varied by states in the United States. I mean, we really do see some states that have taken this above and beyond like Washington state, Washington D.C. even, and New York. But then you have the Florida governor who extended his order that essentially barred towns, cities, and counties from enforcing local mask mandates. In Arizona where I'm from, the governor issued very little state efforts and only allowed local leaders to implement mask mandates this summer when we were starting to really see a surge. So to be quite honest, there's not a lot of national control measures outside of the guidance the CDC is emphasizing and in many ways the national approach has kind of fizzled out really away this summer, leaving the onus on local leaders.

Erin Welsh

Yeah, absolutely. And I think it's been interesting to see sort of the outcome of that. I think I saw a report about, I can't remember which state, but the state had different county by county measures for mask mandates.

Saskia Popescu

Mm-hmm. Yeah it was Kansas.

Erin Welsh

Was it Kansas? Yeah.

Saskia Popescu

Uh huh. Yeah.

Erin Welsh

Yeah! And the counties that had mask mandates had lower infection prevalence or lower infection incidence than the counties that had no mask mandates. And it's like, well of course.

Erin Allmann Updyke

(laughs) Yeah, yeah.

Erin Welsh

How does this translate into actually increasing mask mandates overall? But anyway...

Saskia Popescu

No, I mean, that Kansas example I think was so spot on because the counties that had no mask mandates saw a 100% increase in cases and I think that's such a telling sign of the importance of masking. But I know for Arizona there was an MMWR that came out and it really focused on masking but it was like, well we did all of these other things. So it's really important that we don't just focus on one intervention cause I think that was the mistake we made very early on, like just masking or just distancing.

Erin Welsh

Yeah.

Saskia Popescu

And that's not given people the awareness or the understanding of how the transmission dynamics work.

Erin Welsh

That's a really good point, yeah.

Erin Allmann Updyke

Absolutely, yeah.

Erin Welsh

So here in the U.S. on the national scale, we've seen no clear consistent, you know, not only policies but even like messaging, pro-science messaging from Donald Trump that would have led to perhaps a reduction rather than an increase in cases which is what we've seen. So playing a bit with hypotheticals, how do you think something like a national mask mandate or even just fact-based rational messaging might have changed the course of the pandemic.

Saskia Popescu

Truly I believe this would have made a huge effort. The lack of pro-science leadership and combative approaches to those recommendations coming from those local leaders or even public health figures like Dr. Fauci really promoted partisanship within control measures. And masks should not be a political statement, they're a public health strategy. So had we emphasized some things earlier on like this is gonna take a while to get under control, guidance will likely change as the science improves, and that we need community-based efforts from masking, distancing, limiting at-risk activities. These things would've likely changed course.

I also think national efforts to advance public health communication would've really been impacting and could've combated that false dichotomy of public health vs. the economy, or the U.S. vs. the WHO. So when we focus on support services for people to stay home and rational messaging that really emphasizes harm reduction and reduces stigma and provides pragmatic guidance, we can really make a difference. So what we are seeing with president-elect Biden and vice president-elect Harris is that emphasis on adequate communication, science-based messaging, and masking mandates. I think it was proposed for about 100 days, really to kind of curtail what we're seeing as uncontrolled transmission right now.

So we need not just fact-based but rational, pragmatic... How can you translate this to people to get them to understand why it's important for them? You can't just talk at people, you have to talk with them and I think that's a huge failure we've had in the U.S.

Erin Allmann Updyke

Oh man, yeah. I love too what you said about telling people that guidance might change, I think that that's been a really big sticking point for a lot of people where they just kind of can't get over how much things have changed as we've learned more. And I think that that's something part of the scientific process that people just haven't seen play out in real time before.

Saskia Popescu

No, I mean if you think about it this is, outside of SARS-CoV-1 and MRS, this is really one of the first large scale, I mean obviously it's a pandemic, but it's the first novel disease we've really had to face in the U.S., right? Ebola in 2014, we know Ebola, we know how to handle Ebola. We might not be good at it but we know what to do. This is so novel. I keep reminding people, you know, we identified this in January, late December early January, so we're not even a year out. And sure, the mask expectations were different in March than they are now but that's because we're getting better. In my opinion, I want the evolution of guidance. That means we are learning more, we're getting better. So I always tell people lean into those changes because that means we're getting better at control mechanisms.

Erin Welsh

Mm-hmm, absolutely. Yeah.

Erin Allmann Updyke

Yeah. So kind of looking more globally, there's been a large amount of variation in the way that different countries have handled this pandemic and kind of responded. Could you highlight some of the patterns in either the policies or the practices of countries where COVID-19 has been pretty well managed in your opinion? Like what are some other places doing better than us? (laughs)

Saskia Popescu

Yeah! So I think the shining example that we've seen is really New Zealand. They have taken very early on a pro-science message that explained what transmission looked like, what was high risk, and they really prioritized contact tracing. So I was on a call when they were recently sharing how a single cases was identified and how rapidly contact tracing occurred and how everybody was notified. And they provided support services so people could go to a hotel, they had areas where they could stay if they were supposed to be in quarantine.

So I think we've learned a lot in that approach where it's not just as simple as throwing a bunch of money at testing and healthcare services. We know that's really important but countries like Germany, New Zealand, I think really have taught us a lot. And there's a lot that have done really, really amazing work but more and more I find those that emphasized early communication that was simple and understandable to the public really did better. Japan did really amazing early on billboards, I think, about things to avoid. And that was crowded areas, indoor spaces, you know very simple messaging but got the point across.

And I think those measures have been such role models for us to learn from that we have to invest in communication to the public because we can ramp up testing all we want, we can buy more ventilators all we want but if the general public doesn't understand how transmission works and what they need to do to stay safe, then we've failed. Then I mean the simple messaging of 'mask up' or 'stay home' is very limited. Right? And I think that was something that we have really struggled with in the U.S.

Erin Allmann Updyke

Yeah. Definitely.

Erin Welsh

Absolutely. Yeah. So moving now from sort of this regional practices and measures or nationwide practices and measures to the individual things that we can do for ourselves or we can put into place to help both protect ourselves and those around us. What are some of the things that have shown to be the most effective or that you think might be the most effective?

Saskia Popescu

Well we're in a really pivotal time right now with the state of the pandemic in the U.S., you know we're seeing the highest case counts and hospitalizations ever coupled with the winter months and the holidays. But what we do know is that things like masking and distancing, hand hygiene and avoided crowded, especially indoor spaces, are important. But honestly what I think is the most important is being cognizant that risk reduction is really additive. And as we discussed earlier, the studies in Kansas and even Arizona have shown a lot of impact on masking but those requirements also came with a lot of concerted community education awareness.

But more so it's not just one thing, it's all of them. So just like testing before a flight is helpful but it doesn't eliminate risk. So more and more with the amount of transmission in the community, I really just encourage people to try and stay home when they can but avoid those high risk activities or areas like bars and indoor dining, gatherings where there's a lot of people. But I try to really emphasize that Swiss cheese approach, that additive measure to control efforts because I have found that when we say, 'Well you need to wear a mask when you're outside your house, outdoors it's protective,' people think, 'Well if I'm outdoors and I'm around other people but I'm outdoors so that's helpful, so I don't need to wear a mask.' And we know that if you are within close contact of people outside your household, even if you're outdoors, you still need to be wearing a mask.

So what I have really found is that discussing that additive approach has been the most helpful and that it's not just the masking, it's not just the distancing and trying to be outdoors and the hand hygiene, it's all of those things together because all of them work together. One is imperfect but together they help reduce risk. Nothing is gonna eliminate risk right now. So how can we give people the tools to think critically and make informed decisions?

Erin Allmann Updyke

Absolutely, yeah. If we could focus a little bit on masks, since that's been a large part of the conversation. We know that not all masks are the same. Could you maybe break down some of the different types of masks and explain which ones seem to be doing a pretty good job or helping to slow down transmission and which ones might not be quite as effective?

Saskia Popescu

So really what we see are three things: cloth face coverings, surgical masks, and respirators. Now respirators are N95s and those half-face respirators that can be reprocessed and they're very specific to healthcare settings where we're doing aerosol-generating procedures and they require, actually, fit testing to make sure that you have a good seal and a good fit and that you don't have a medical contraindication because they filter out about 95% of the particles that are 0.3 microns in size or larger. So very highly protective, very helpful masks for healthcare workers but they're very dependent on the fit and making sure you have the right seal.

Below that we have surgical masks. Those are more loose-fitting, they're disposable, we often use these for the physical barrier around your mouth and your nose and that's for larger droplets and splashes but not those smaller particles or aerosols.

So next you would see the most common one we're seeing in the community right now and those are cloth face coverings. These do act as more of a source control. We are more and more learning that they do have some variable level of protection for the person wearing them but part of the problem is that you did see for a while people wearing cloth face masks with an exhaust valve, and that's the exact opposite of what we want because you're basically exhausting potentially infectious air. So that's something that we really don't want to see people doing whether it is a cloth face mask or any other kind of mask that has an exhaust valve without a filter on it.

So research has really shown that both surgical masks and the unvented KN95. So if you heard about KN95s, those are the Chinese masks that have been granted emergency authorization for use in the United States. Early on these were just for healthcare workers but they became more widely available for the public. I always tell people though if you're gonna buy some make sure you check the CDC and the NIOSH website because there have been some issues with counterfeits. So just check the manufacturing number. But they do offer a higher level of filtration and protection and they're a little bit more fitted around the face, so they fit more snugly. And they do actually, between them and surgical masks, they can reduce the outwards emission up to 90%.

So we know that filtration, though, is lowest for the cloth mask. That's lower than a surgical mask and a respirator but they do offer varying levels of support. Moreso we've found that people wearing multilayer cloth masks that are fitting a little bit more snugly around the face, have a better fit, water-resistant fabric is always great, finer weaves, and a higher number of threads, they do offer some reasonable protection. So I think the moral of the story is those higher level N95s are really for healthcare workers and I've seen a lot of people wear them but unless you have a proper fit test and a seal, they're not giving you the protection you might think.

So I'm a fan of the surgical mask when I'm out in public or KN95 if it's not a counterfeit one and you've validated that. But we've seen some good success with cloth masks, I just really encourage people to make sure it's fitted around the face, you have multiple layers, and it's covering your nose and your mouth. (laughs)

Erin Welsh

(laughs) Yes.

Erin Allmann Updyke

That's one of the most important parts, that you're actually wearing it to cover your nose and mouth.

Erin Welsh

Oh my gosh.



Saskia Popescu

Why don't you just buy one that fits? So much about masks is about the seal and the level of filtration they offer.

Erin Allmann Updyke

Yeah, totally.

Erin Welsh

So as we've talked about, you know, in this conversation we've talked about how the risk of infection is this moving target and its additive, like you can control sort of the different levels of risk that you have. You know, it depends on things like where you live, what your health status is, and most importantly what risk behaviors you engage in. And our knowledge of transmission and how transmission happens and where it happens has become a bit more nuanced as the pandemic has progressed.

So going into sort of the breakdown of this, large gatherings are likely to be more transmission than small gatherings, or is that the case? Are grocery store visits and outdoor runs, how do they compare to things like indoor dining or working out in a gym? What are we seeing as hotspots of infection that we may not have seen at the beginning of this or may not have identified as hotspots earlier on in this pandemic?

Saskia Popescu

Yeah, so I think that's a tough one because there's the environmental aspect of what is the environment, you know. Are you in an office building, are you at a park ramada? And then there's the human factors aspect of it. So anything can be unsafe if a bunch of people come together, right? (laughs) So we know that the riskiest places are indoors where there's a lot of people for a prolonged period of time, they're close together, and in some cases they're even far apart. But we know that if you've got a lot of people inside, they're not wearing their masks, ventilation might be iffy. So that to me means bars, restaurants, right? Places where you are not wearing your mask consistently even if you are spaced six feet apart.

That automatically though puts kind of those environments into our context of high risk but if you had a huge office building and people very, very spread apart, less risky. But more and more we are just emphasizing that indoors, you know we have seen some cases where people along the air conditioning line, right, where it's venting out, it's blowing out, are at higher risk than people that aren't. So we've seen clusters and even superspreader events stem from house parties, weddings, choir practices, early on a gym, and events like the nomination of Amy Coney Barrett at the White House.

So when we look at those other areas like grocery stores, I think so much of the early emphasis on grocery stores and even gyms put a lot of attention on the infection control measures. And it was interesting because for the grocery store especially, those interactions are every brief. But so early on in this pandemic because there was so much attention to those areas, they put in so many wonderful control measures like limiting the number of people inside, everybody's gotta wear a mask, hand hygiene, you know, barriers for the cashiers, and all of these little pieces. And I think that's really made a big difference.

We have found that there have been some outbreaks associated with gyms but a lot of that is because they weren't taking the necessary precautions and, you know, it's simply that we weren't ensuring that those measures were in place. And part of it I honestly believe is it's really hard for a business to suddenly have to implement all of these infection control measures without a little bit more guidance. So when we look at gyms, I've also seen many take great precautions to ensure spacing, masks, disinfection, open windows and outdoor exercises. And it's funny because even Dr. Fauci said he wears his mask under his chin when he runs and then pulls it over his mouth and nose when he sees someone coming near him. And I think that's a great strategy for what we've been emphasizing with outdoor activity is that you can be distancing but might come into contact with others.

So really what it comes down to is what are you doing in this activity? Are you unable to wear a mask? Are you indoors, are you around others? Or are you able to be outside, distanced, and masked? I do think the challenge we see now is people get fixated on one piece of the recommendation like outdoor dining and forget the rest. Which is why we're seeing people create basically indoor dining experiences outdoors, like those little igloos or they put up walls all around and it's kind of defeating the purpose of those recommendations.

Erin Welsh

Mm-hmm.

Erin Allmann Updyke

Yeah, absolutely. So we are unfortunately very much in the middle of a massive surge in cases and COVID-related deaths here in the U.S. And even though we know a lot more now than we did at the beginning of the pandemic about the fundamentals of the virus transmission and the ways that we can control it, a lot of these haven't really changed, right? Even though we've learned a bit more. So where do you think this surge is really coming from?

Saskia Popescu

Well, you know, I do think we've learned more about infectiousness so we know that people are more contagious a couple of days before their symptoms and for about five days after. We've learned more that people can shed culturable virus for up to 10 days after their symptoms, so now we know really isolating people for 10 days is super important, and that they can shed nonculturable virus and be PCR positive for like 80-90 days. We've also learned more about situational airborne transmission and that while most transmission is through close contact, we've seen cases where people were further than six feet apart, indoors, ventilation may not have been great and there were no masks.

So, you know, all of these really contributed to transmission which really emphasizes the use on masking when you're indoors and outside your home. But ultimately I think the surge that we're seeing right now is a product of a few things. First of all, cold weather. That moves people indoors, I know that there was a lot of questions about the seasonality of COVID-19. For the most part, virologists have really said this isn't about seasonal warmth or air, it's about human factors, right. A virus needs a human and it's all about our habits. So cold weather moves us all indoors, we tend to be more social creatures around the holidays.

And with that plus pandemic fatigue in people honestly just deciding that this is gonna be around for a while so why are we taking it that seriously. This is why we're seeing over 210,000 cases a day and 100,000 people are hospitalized. This is such a serious inflection point in the U. S. I feel like we keep saying this but the impression I've really gotten from many and the one that scares me the most is that they're just tired of COVID-19 and the lack of leadership and efforts in the U.S. means it's either not serious or it's gonna be around for a while so why should that impact their activities moving forward? You know, if this is gonna be with us why shouldn't they have a normal Thanksgiving or get together with friends at a barbecue? And those little nuances worry me on top of what we know is pushing transmission. You know, people moving indoors, more people are traveling now on holidays.

Erin Welsh

Mm-hmm, mm-hmm. Yeah. Yeah and so that kind of brings me to ask whether with this COVID fatigue that I think probably everyone is feeling, do you think that these lockdowns or increased restrictions that are being put into place in some high-prevalence locations, do you think that they'll have the same effect in flattening this third wave as they seemed to earlier in the pandemic when there was perhaps a bit less of the fatigue?

Saskia Popescu

Yeah, I mean, I think we've learned a lot about restrictions not being binary, right, it's not a closure or open, it's more of a light switch dimmer, so more targeted. I do think they will help but it's honestly hard to tell right now because we're dealing with the holidays and cold weather plus a lot of these interventions take weeks to see the results, right? I think we're more aware of the importance of communication and strategic with it and being incremental and very targeted and knowing that we need to focus on things like bars and indoor dining and large gatherings, and focusing on those so that we can prioritize school openings.

We know things like tournaments and weddings and gatherings are at risk for transmission so there's been a lot of focused efforts around those. The issue though is that we're still seeing a lot of politicization of masks and public health measures. So in Arizona where I live, the city of Phoenix recently just said, 'We're gonna close the parks to tournaments' because they had had hundreds of people gathering for tournaments which is a huge risk for transmission. And that was met with a lot of resistance.

So, you know, ultimately I think it's important to note that this massive wave really across the entire U.S. that we're seeing is, it's rolling. The U.S. is such a massive country and it's very siloed in how it's approached this. So what we saw this spring and summer was a rolling wave from the northeast to the sunbelt. So in some ways this is very new, we've not seen what we're kind of experiencing right now and yet we're trying to apply the lessons we know we should learn.

So I do find that a strategic approach often is more beneficial, often gets more public support which is what we need for interventions to be successful. Think we've learned that lesson versus the first time where it was everybody's got to close down and now it's let's be a little bit more specific, a little bit more targeted but really emphasize and take the time to communicate with the public so that we can get their buy-in. Because if people don't agree with or understand why you're closing certain things, it's not gonna be successful. And that's been really confusing for people, like why are we closing schools but bars and restaurants are still open?

I am hopeful that these targeted efforts are gonna be more successful but I always stress with people it takes time and it's gonna take much more time when we are seeing just such uncontrolled transmission in the community right now.

Erin Allmann Updyke

Yeah, absolutely. Do you think or maybe have we seen yet so far any kind of reduction in other seasonal respiratory infections kind of overall because of, at least in places where risk reduction strategies are being implemented? Do you think, have we seen or do you think that we could see a reduction in other infections?

Saskia Popescu

Yeah, I'm really hopeful. So we did see historic lows in the southern hemisphere like Australia, Chile, and South Africa for flu as a result of the interventions that were developed for COVID-19 and that big emphasis on flu vaccines. So I think a big piece of this is testing. Last year, or I should say early this year technically, suddenly we saw this massive drop in tests being done for influenza. And you can tell you just having worked in healthcare during that time, it felt like everybody stopped testing for flu. Suddenly if you came in with a cough and a fever, you were getting COVID-19 testing. You were not getting flu testing.

So now I think we're so hyper-aware of the potential for it to be a double whammy that there is gonna be a lot more emphasis on testing, so hopefully we'll have a better understanding of the flu activity. But overall we know that these interventions for COVID-19 are the same for other respiratory infections. Masking, distancing, hand hygiene, cleaning and disinfection, social distancing, those all with have a positive impact. So I'm very hopeful that we'll see what occurred in Australia happen here. I think a lot of that though is gonna be for us to test appropriately for it.

Erin Allmann Updyke

Yeah.

Erin Welsh

So public health officials have made it pretty clear that non-essential travel should not be conducted especially during this holiday season and maybe especially during this incredible surge. But of course people are going to travel anyway. And so, you know, knowing that what are the steps that they can take to be as safe as possible if they are committed to traveling?

Saskia Popescu

Well first, I'm always gonna go back to risk reduction being additive, so it's not just the mask or the distancing or the pre-travel testing that many people do, it's everything. So I always encourage people to do a few things and this is stuff I practice when traveling for work, you know, I'm never gonna give guidance that I couldn't follow myself. And first and foremost is don't travel if you're sick or if you've recently been exposed. And I hate that I have to say it but I've unfortunately seen it, so try to build in some quarantine before and after you travel.

Be mindful of where you're going and where you're coming from. Are you going to an area of high prevalence from an area of low prevalence and vice versa? Cause it's not just about the traveling, it's also about the places you're going and the activities you're doing. When you're at the airport, I tell people on the airplane try to sit at a window, airplanes have wonderful ventilation and air exchanges. Try to get that window seat cause that way you're around less people. Wear your mask at all times, clean your hands frequently and avoid touching your face or under your mask.

One of the biggest things that I personally have seen is that we tend to not be mindful of when we're eating and drinking. So look at those around you. If you're on an airplane, when they hand out the water and the snacks in these little baggies, everybody does the same thing at the same time. They tug off the masks, drink some water, and they eat a snack. It's the same time. (laughs) And so I always, and you know I think it's really fascinating because we've developed these wonderful little snack bags but we're handing them out at the same time to everybody, so everybody is then engaging in maskless time of eating and drinking. So I try to be super mindful of that and I just kind of stagger when I eat and drink based off those around me.

And I see a lot of complacency at the baggage claim and at the gates, it's kind of like people think they got to the finish line. So please make sure you're still wearing your mask and distancing then. And moreover I really think the biggest thing is that you really need to ask yourself do I need to travel or can I make this a safer approach through a virtual visit? Just because you test pre-travel does not mean you are not potentially sick when you travel. Testing is one moment in time.

Erin Allmann Updyke

Yeah, I think that's so important and I love the graphs that I've seen of when certain tests might become positive based on when you were exposed and how variable that can be.

Saskia Popescu

Oh yeah. And you know it's so interesting to me, I think there was a study I think that just got a lot of attention, or a case study, where somebody was tested a few days before they traveled internationally and became infectious on the plane and it led to subsequent cases but nobody mentioned that the test was five days before the travel.

Erin Welsh

(gasp) Oh, gosh.

Saskia Popescu

And so it kills me because especially as we start to see testing delays in the U.S. with everyone going to get tested before the holidays or before they travel, no test is perfect, right. And even if you get tested the day of, there's still a percentage that it might be inaccurate or that you could become positive the next day. So I really stress that testing is very reactionary, it's a secondary form of prevention, and that it should not be used as a means for engaging in less safe behavior.

Erin Allmann Updyke

Yeah, absolutely. So I think our last question is something that you have mentioned and we've kind of touched on a little bit and that is COVID fatigue. I think that's a very real thing that so many people are experiencing. What would you like to say to someone that is experiencing COVID fatigue?

Saskia Popescu

(laughs) I mean it's real! COVID fatigue is real. I think we all need to appreciate that, we're living and working in a pandemic. And this is coming from somebody who has studied and lived pandemic preparedness my entire life, it's something that I'm passionate about, and it is exhausting. You know it's a true pandemic, something you don't see very often and this one is really bad, and especially in the United States, so. Coupled with the fact that we're in the middle of an election year with a lot of politicization of basic public health. We're all just trying to get by.

So I really encourage people just be safe. Keep going and try to preserve some semblance of mental health, reach out to people, you know, I say that this will eventually get better though. Instead of focusing on what we can't do, try to pivot to what we're able to do and creative ways to have holidays or normal activities. Ultimately we're all in this together and we need to support each other. So that looks like a lot of different things, from not stigmatizing or using shame to checking in on people and taking time for yourself. And honestly not being so hard on yourself right now, this is such... It's been the longest year. (laughs)

I think there's a joke for a lot of us that if you look at COVID symptoms, one of them is a headache. And it's like, well we've all had a headache for 2020, we're all tired.

Erin Allmann Updyke

(laughs) Yeah.

Saskia Popescu

But the truth is, it's hard working in it but it's just hard living in it. So I try to preserve that hope in that it will go away at some point. It might not be immediate, I think that was a mistake we made early on was giving people a date. And it might take awhile but we will get ahead of this, whether it's through vaccine development or just getting better at community interventions or both. But we will get there, so now it's just about protecting yourself and those around you and trying to focus on your mental and physical health and, you know, just wellbeing.

Well people keep saying, 'I just want it to get back to normal.' Normal's what got us here. I want us to honestly get to a new point where we prioritize public health and pandemic preparedness but also support services that make it possible for people to be safe and stay home.

TPWKY

(transition theme)

Erin Welsh

That was such a great interview. Thank you, thank you so much for taking the time to chat with us, Saskia.

Erin Allmann Updyke

Yes. And there was so much great information and I feel like she explained it so well and I learned so much.

Erin Welsh

Absolutely.

Erin Allmann Updyke

And because there's so much that we learned, just like with our earlier episodes in the series, we wanted to close out with a recap of five key things that we feel like we learned in this episode.

Erin Welsh

Number one. This one doesn't come as much of a surprise but communication is key. And we can see the effect that different types of communication or different messaging has had on the spread of the virus by comparing, for instance, places that issued a mask mandate compared to those that did not. Early on, messaging about the pandemic should have included things like, 'Hey, this is gonna take a while to get under control.' And, 'We need community-based efforts for masking, distancing, and limiting at-risk activities.' And crucially, 'Guidance is likely to change as we learn more about the virus and it's transmission.'

Erin Allmann Updyke

Yeah.

Erin Welsh

And I liked that last point especially, I thought it was super important because when we change our policies or practices based on new information we receive, that means science is working. That's what is supposed to happen in life. (laughs) When you're presented with new information you adapt, you incorporate that. Science is happening in real time and it's frustrating and it's kind of confusing but we are putting into place the policies and practices that we believe are best at the time based on the information and knowledge we have at that time.

Erin Allmann Updyke

Exactly.

Erin Welsh

And so now what we need to do is focus on presenting this information about control, about individual and community-level practices in a pragmatic way.

Erin Allmann Updyke

Right.

Erin Welsh

So there have been, recently, comparisons about abstinence-only sex education and some of the messaging regarding COVID-19-

Erin Allmann Updyke

Yeah!

Erin Welsh

-where it's like, we know that abstinence-only sex ed doesn't work. And so we need to focus on explaining the science behind why these control measures work and focus on risk reduction rather than risk elimination and endorse behaviors or practices that people can reasonably incorporate into their lives.

Erin Allmann Updyke

Yeah.

Erin Welsh

And globally what we have seen is that countries that promoted a pro-science message and pushed for public understanding of how the virus is transmitted and why control measures work, have fared much better than other countries like the U.S. which presented this false dichotomy of public health vs. the economy, for example. So it's definitely, definitely way past time for a big pivot here in messaging if we want to slow this virus from its current breakneck speed.

Erin Allmann Updyke

Absolutely. Number two. Masks! Ah!

Erin Welsh

(laughs)

Erin Allmann Updyke

Masks are one of these really great examples of how guidance has changed as this pandemic has continued and as we have learned more about the science behind masking. We have learned that masks are hugely important in slowing community transmission of the virus and that wearing a mask not only protects those around the mask-wearer but that they also provide at least some degree of protection to people wearing them, which is pretty new information.

Another thing we've learned regarding masks is that not all masks are the same. Of course the N95s and respirators are going to provide the highest degree of protection but those are reserved for healthcare workers, as they should be, because they're doing aerosol-generating procedures, for example.

Next up are the KN95s which are pretty good but if you buy them, check the manufacturer's details to make sure that you have a legit one cause there's false ones out there, and surgical masks. The KN95s and surgical masks are more effective than regular cloth masks at reducing outward emission of particles, but even a cloth mask still does work. Especially multilayer ones. What's really key about the effectiveness of all these masks though is that they fit your face and you're wearing them properly! (laughs)

Erin Welsh

Don't let that nose hang out, please. (laughs)

Erin Allmann Updyke

Adjustable ear loops or a wire nosepiece tend to be really great for making sure that they actually fit on my face, for example.

Erin Welsh

Mm-hmm.

Erin Allmann Updyke

Another great thing about cloth masks is that they're washable, which means they don't have to be thrown away but also means that you should wash them after you wear them.

Erin Welsh

Yep.

Erin Allmann Updyke

And exhaust valves essentially defeat the purpose of wearing a mask, so.

Erin Welsh

Yeah, yeah.

Erin Allmann Updyke

And most importantly, we said this in even one of our regular season episodes, ahem: masks aren't a political statement, they're a public health strategy. And they work.

Erin Welsh

Yep. Yep, yep, yep, yep. And yep.

Erin Allmann Updyke

(laughs)

Erin Welsh

Number three. Strategies for risk prevention are additive and no single strategy works completely and perfectly.

Erin Allmann Updyke

Yeah.

Erin Welsh

Yep. If it did, we would have implemented it months ago and we wouldn't be in the position that we are today. You may have seen the Swiss cheese approach that Dr. Popescu mentioned a few times drawn out but it goes something like this: you can think of each strategy as a piece of Swiss cheese. It's got holes. Also I wonder is it just in the U.S. that it's called Swiss cheese?

Erin Allmann Updyke

Oh, good question! Like Jarlsberg? No, that's a different kind of cheese. Holey cheese.

Erin Welsh

So basically, what we think of as Swiss cheese, it's a slice of square cheese and it's got a bunch of holes in it. So imagine that. Swiss cheese. (laughs) Anyway, for example, masking is one strategy; one piece of Swiss cheese. It helps to a degree but it still has those holes in it. It's still imperfect. And in those holes, the virus can pass through and still infect you. And so what you do is you add another layer of Swiss cheese: social distancing, which also has holes in it but together with masks you've got two layers. And so you add another layer, hand hygiene, etc etc. and so because no two pieces of Swiss cheese look exactly alike, like snowflakes, as you layer these pieces of Swiss cheese together you eventually get to a very, very minuscule risk of transmission, all of those holes end up overlapping with pieces of intact cheese, I guess you could say.

Erin Allmann Updyke

(laughs) Yeah, exactly.

Erin Welsh

And there are personal strategies we can use, individual actions we can take, like the distancing and masking and washing our hands, but also community strategies like testing, contact tracing, government support, and messaging surrounding the virus and eventually vaccines. These strategies are additive. We need them all in order to reduce our risks of transmission.

Erin Allmann Updyke

Yeah. That's, I feel like, a big one. It's not all or nothing. Speaking of all or nothing, number four. Lockdowns are not binary. They're not all or nothing either. I think early on in the pandemic, some places took a very all or nothing approach and we've seen the effects that that has had on everything from the economy to our collective mental health. And no especially that we know more about the ways that the virus is transmitted, there can and really should be more nuance in our policies and strategies.

So instead of shutting everything down everywhere, we can focus on the areas of high transmission or issue better guidelines on how to operate safely in a very pragmatic way. For example, we know that restaurants and bars are areas of high risk but schools are maybe less risky for transmission than we previously thought. So targeted shutdowns and strategies can take into account not only things like percent positivity in an area and available hospital beds but can also be location or activity-specific. Instead of lockdown vs. normal pre-COVID activities.

But we need public support for any interventions to be successful and that means... I feel like we can't stress number one enough.

Erin Welsh

(laughs)

Erin Allmann Updyke

Communication is key. Guidance has and will continue to change as we learn more and as this pandemic continues to progress. And it is good for our guidance and strategies to shift as we continue to learn more.



Erin Welsh

Yeah. And number five, our last point, is that this will all end eventually. Really, it will. But it's not going to be anytime soon. COVID-19 has taken millions of lives already and no single intervention, not even a vaccine, will stop it tomorrow, or the next day, or even in a week. COVID fatigue is very, very real and it's something that we are all experiencing to one degree or another. So we have to find ways to continue to reduce our risk while maintaining sanity. And this might look different for each of us but taking a risk mitigation approach is key rather than just giving up and assuming we are all going to get infected or worse, pretending that it's not real. It is very, very, very real.

We can all continue to use a combination of strategies. Masks, social distancing, staying home when we can, etc etc as best as we are able to continue reducing our individual risks while flattening that curve of community transmission. There is a light at the end of the tunnel, we're just still in that dang tunnel for the time being.

Erin Allmann Updyke

Yeah. It's a long tunnel and it's much longer than we wanted it to be.

Erin Welsh

Yeah, it is.

Erin Allmann Updyke

It's a very dark tunnel.

Erin Welsh

It's a very dark tunnel.

Erin Allmann Updyke

It's a very dark tunnel.

Erin Welsh

Well. (laughs)

Erin Allmann Updyke

(laughs) But it's not like the Mines of Moria, like...

Erin Welsh

I mean, no, it is not as dark as the Mines of Moria.

Erin Allmann Updyke

Yeah. (laughs) So with that-

Erin Welsh

(laughs) With that we would like to thank Dr. Saskia Popescu once again for taking the time to chat with us. We had such a great time.

Erin Allmann Updyke

Really, truly.

Erin Welsh

And we are gonna continue to be salty about not being invited to the zoom happy hour.

Erin Allmann Updyke

It's fine, we understand.

Erin Welsh

We understand. Yes.

Erin Allmann Updyke

Anyways.

Erin Welsh

Anyways. Keep an ear out, keep an eye out for more episodes of these coming your way, as we mentioned, they're not going to be on a regular scheduled format and so please do add us on social media or subscribe to use on your podcatcher so that you don't miss an episode. And we promise a vaccines episode is upcoming and we really hope to answer all of your questions regarding the COVID vaccines that have been all over the news lately.

Erin Allmann Updyke

Yeah. Yeah, definitely. Thank you to Bloodmobile for providing the music for this episode and all of our episodes.

Erin Welsh

And thank you to you, listeners, for listening. Again, feel free to reach out with any questions, suggestions, don't forget to fill out the firsthand account if you are so inclined. And until next time, wash your hands.

Erin Allmann Updyke

You filthy animals!