Dr. Becky Smith Interview

Associate Professor of Epidemiology, College of Veterinary Medicine and the Carle Illinois College of Medicine at the University of Illinois Urbana-Champaign

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SPEAKERS
Dr. Becky Smith, Paul Gilbert II, Jenna Courtade

Paul Gilbert II 00:06
I'm used to like going, “this meeting is now being recorded.” Okay, so starting off the housekeeping stuff. My name is Paul Gilbert. I am a graduate student representing the University of Illinois Archives. And I'm joined by…

Dr. Becky Smith 00:24
Becky Smith. I'm an Associate Professor of Epidemiology.

Paul Gilbert II 00:30
Today's date is Monday, October 10, 2022. We are meeting on Zoom to discuss Dr. Smith’s responses to the COVID-19 pandemic for inclusion in the University of Illinois COVID-19 Documentation Project. So, first question, Becky, could you briefly describe the various roles you play with the university? And how do you balance all those hats?

Dr. Becky Smith 00:57
[Laughter] So, officially, I am an Associate Professor in the College of Veterinary Medicine. As of 2021, I am also appointed in the College of Medicine, the Carle, Illinois College of Medicine. Officially, my appointment is 80% research, 15% teaching, 5% service; that obviously changed during the pandemic, a bit. But primarily, my role is to do research, and to do research specifically on infectious disease control. So, I have a number of different projects, and balancing all of those projects is always the challenge. But I primarily am doing research, I teach one graduate course in the Fall, and a one-credit graduate seminar in the Spring. But that one is optional. So, the course in the Fall is the really only course and then I teach the vet students for six hours total. My service is generally very light, and it's just committee duty.

Paul Gilbert II 02:09
Fair enough. Do you remember the first time you heard about COVID-19? And especially as an epidemiologist, how concerned were you about this virus at the very beginning?

Dr. Becky Smith 02:26
At the very beginning, I was keeping an eye on it, but I was kind of downplaying it. So, I probably heard about it in December of 2019, but really started hearing about it in January, just through social media,

through my networks. Was hearing about it. But what people maybe don't know is that if you're in the infectious disease world, these things happen all the time. So, you hear about, oh, there's some unusual disease happening in this corner of the world and you keep an eye on it. And usually, it turns out to be oh, well, it's some something that we just know about, like, oh, yeah, well, it's just Dengue. Or it's just Ebola, like, just Ebola, but we know about Ebola, we know how to deal with it. So, we were hearing about this, it's like, okay, it's a respiratory illness in China. We'll keep an eye on it. But I definitely was kind of telling people don't get too excited. There's actually in January, I was doing a Skype A Scientist, which is a thing where scientists Skype into or Zoom into elementary school classrooms around the country and answer questions for the kids and the kids were all asking me about it. And I was just telling them, you know, you're in rural Missouri, it's not going to affect you. Just get your flu shots and wash your hands. That's all you need to worry about right now, because you're more likely to be affected by the flu. So, you know, I was kind of downplaying it a little bit. But it was late January, early February that I started to become concerned. And about that time I was at a meeting that was being run by the CDC because I do some work on vector borne disease that is CDC sponsored. And they had an in person meeting. And while we were there, we were talking about it more and I knew some of the CDC colleagues had had to trade duties because they were supposed to be deployed to Southeast Asia. And then they had to trade duties to be able to be at this meeting. And so, I was there with a lot of public health people, CDC people and just talking about it with them was clear that it was going to be a concern.

Paul Gilbert II 04:53
So, in the original documents, I written this as one question but I feel like It makes more sense to break it up into two. How did the emergence of COVID-19 impact you? Firstly, as a professor, you mentioned earlier about how you teach one class in the Fall traditionally, as well as the seminar, and Fall 2020, I think was still mostly online at the university. I wasn't here to say yea or nay on that being true. But go ahead.

Dr. Becky Smith 05:31
Yeah, Fall 2020. I did not teach my course. Because for Fall of 2020, we were in the midst of building the SHIELD program, of doing all the response. And I actually had, I said earlier that I was I'm 80% of research most of the time and only 5% service, I rejiggered my appointment so that I was 30% service for 2020-2021 school year. It's probably an undercount. So, I was doing so much work with the SHIELD program, building the SHIELD program. I was in charge of coordinating all of the IRBs for all of the SHIELD program, which was a lot of work. We were building multiple research projects. And I just said I could not possibly hold my course, my course I should say, every year has 10 to 12 people. So not having it for a year is not going to affect it terribly much. So, I just didn't hold it in the Fall of 2020. And I just dropped my teaching and focused on the service part. For that year. I also had four grad students defending in the course of that academic year. So, I was a little busy on the other side of the teaching. So, yeah, I didn't teach in person that semester.

Paul Gilbert II 06:58
Okay. Could you briefly explain what an IRB is?

Dr. Becky Smith 07:04

IRB stands for Institutional Review Board. And we say we're dealing with the IRB, but it's really, so the Institutional Review Board is in charge of protecting human subjects research. And their job is to look through the protocols and look through all the materials and make sure that the human subjects are being protected in the course of research. For the SHIELD program, we worked with an external IRB, because the internal IRB, we have a couple on campus, but they would have all been affected by the research program, so it was considered to be a potential conflict of interest. So, I was working with an external IRB, making sure all of our protocols were in line, making sure we were communicating everything we needed to communicate, getting all of our documents in, and then working with the people who were collecting the data to make sure that we were only collecting what we were allowed to collect, and that we were taking all the precautions we needed to take. So that it's basically human subjects protection.

Paul Gilbert II 08:14
And how did that differ than working with an internal review board? Like were there extra hoops that you had to go through because the fact that these were people, both within and without the university trying to make sure that you're following all the rules and guidelines.

Dr. Becky Smith 08:34
It's actually the same rules and guidelines. So there, there are federal guidelines that the IRBs are supposed to follow, it's slightly different paperwork. But the paperwork is actually a bit easier because being a paid IRB, they are much faster to respond because they have people on hand. Our IRB is entirely, we have some paid people, but most of the IRB is people who are doing this as their service job. And so, it's not quite as quick to respond. So, the external IRB, it's actually a little easier to work with. It's an all online system. And they are not as they're not as careful about the social science side of the research, which meant that they weren't as picky about some of those things, which I'm not a huge fan of, but I tried to stick to our normal guidelines. As far as our human subjects protection, they were very careful about crossing all the t's and dotting all the i’s, but didn't ask as many questions as our internal board would have about the questions that we were asking and our methods of recruiting, which I kind of wish we had had, but people from our internal IRB were actually helping me with the protocols. So it wasn't that they weren't involved at all, they were actually helping me with it. It's just a different process.

Paul Gilbert II 10:07
Could you talk more about the nascent stages of the SHIELD program in the role that you played in the very beginning? We're going to spend the next couple of questions talking about SHIELD as a whole.

Dr. Becky Smith 10:24
So, I can't remember exactly when I was brought on board, it was I think, April or May. And at that point, Marty Burke and Paul Hergenrother, they had already gotten their team together to develop the test. And they had pulled in Tim Fan who they worked with on other research projects to develop the diagnostic lab side of things. And Tim mentioned to them that they probably needed an epidemiologist and that I was around. So that's when they contacted me about being part of it. Nigel Goldenfeld, had already been recruited to be the modeler on the team. And so, I had met him but only briefly before. So, he and I got paired together and started working on, we were told that our job was to figure out when to

test and how often to test and how to set up the testing. And that summer, was a lot of kind of back and forth, thinking about. So, I was approaching it from my expertise as an epidemiologist. So, I was looking at what we know about the viral dynamics curve and doing some back of the envelope calculations based on that. And then thinking about other alternative approaches, cause early on, we didn't know how many tests that diagnostic lab would be able to do. So, we were starting to approach could we do a risk-based surveillance where we select people for testing based on their particular risk. And then Nigel was building the model. And so, he was coming to me sometimes to ask questions about infectious disease modeling, because he's a brilliant modeler, but he was very new to infectious disease modeling. So, it was a lot of back and forth, and a lot of we're not sure how many tests we'll be able to do, we're not sure how we're going to be able to set this up thinking about logistics of things. Also, that was when I was asked to be coordinating the IRB. So, I was learning all the new IRB protocols and trying to get all of the IRB protocols in because we were also trying to validate the test. And then helping to design the studies to validate the test. There was a lot of back and forth, and here and there just trying to, I had my finger in a lot of pies. And I should say the entire time that this was going on, I had both of my kids at home. And my kids at the time were seven, and just turning three. So, I was watching them half the day, my husband was watching them the other half of the day so that we could both do our work. So, I was trying to do all of this work while also taking care of my kids half the day. So, it was it, it's hard to remember exactly what I was doing. Because I was doing so much and my mind was bouncing from one thing to another all the time. But, I was a lot of work being done in a lot of areas. So, it wasn't really until July, late July, that we really had a handle on what we were planning to do. And that was just because the lab came through and said yes, we can test everybody twice a week, we will have the capacity to do that, which made everything a lot easier, because we could just say that that's what we need to do. And that's when we started interacting more with the administration, the senior administration to tell them this is what our plan is, and this is why we're making it for a lot of that I let Nigel do the talking and I kind of stepped back because he's more used to talking to people at that level. I should also say that I only got tenure in August of 2020. So, all the time planning this I knew that my package had been approved at the university level but it hadn’t been approved by the trustees yet, so I was not quite fully tenured. So, it was an interesting period to be fairly up in the air and doing a lot of everything, a lot of all of the things that I've been trained to do. And being very much the junior member of the team and trying to also deal with impostor syndrome at the same time. Although, later on, I started realizing that I was the only member of the team who had actually trained for what we were doing. So, that helped with being the junior member of the team.

Paul Gilbert II 15:28
Something, something, Dunning Kruger effect?

Dr. Becky Smith 15:32
No, no, actually. So, although I was the junior member of the team, everybody knew that I was the one who had trained on this. So, they listened to me. I very rarely had to argue for what I thought was right. Occasionally, one of them would think that they had a better handle on what should be done. And I would have to argue back and say, no, this is Epi 101, this is the way you do it. But in general, anytime I said, this is something that we need to do. Every single member of the team would step up and would follow through on that, and they would give me the credit. They were really incredible people to work with.

Paul Gilbert II 16:21
I more so meant from the perspective of, you knew so much about this field. And were so experienced that you started to doubt your own knowledge base compared to everyone else. Not saying that there were a bunch of people who didn't know what they're talking about and shooting from the hip, while you had to defend your credentials, essentially.

Dr. Becky Smith 16:50
Yeah, no, it was more that there was so much to be done in such a short period of time. I used to joke that I went to epidemiology because I don't like to deal with emergencies. That emergencies are not my thing. And the joke is, well, I'm a disease modeler the closest thing to an emergency I'd had before COVID-19 was somebody coming to me and saying, “Can you do this in a month? Like, can you build a model and analyze the data in a month?” And I said, “Yeah, I have a postdoc who can do it in a month, that's no problem.” So that was my emergency take prior to this. And so, it was designing clinical trials and designing IRB protocols and building a surveillance program from scratch, all within a couple of months, that that was just--. While having no childcare. So, it was just a lot all at once. So, it's not that I doubted my own knowledge, it was just a lot at once.

Paul Gilbert II 18:02
So, my question is, my next question. Excuse me, you mentioned that Nigel, at the very least in the beginning was the main person who was the point of contact between the SHIELD team and the administration. Has that dynamic change at all, and you starting to be a more active part in those conversations, or you still no more of a I let the data speak for itself of kind of person?

Dr. Becky Smith 18:36
So, not between the SHILED team and the administration. But so, SHILED had three sub teams. And Nigel and I were co leading the target team. So, I let Nigel be the point person for the target team. Marty Burke was really the leader of the SHILED team during that period. So, the SHIELD team as a whole Marty would represent us, but when it came to the target team, I let Nigel do a lot of the talking. And that did change over time. For one thing, Nigel has retired from the University and is no longer around. But as we got to know each other, I was more familiar with people. And so I could speak up a little bit more, but generally, it's easier if one person is the point person and so I would let Nigel take the lead on leading and when it came to times when my expertise needed to speak, he would generally step back and have me speak up. But it was just easier because he knew all of these people already, whereas I didn't know the senior administration at that point. So yeah, it changed over time. Still changes.

Paul Gilbert II 19:59
So, related to the conversation is between Nigel and the administration, how did you feel as a modeler about the initial plans for returning to campus? And looking a bit ahead about the changes announced in Fall 2022, at least at the University of Illinois Urbana Champaign, where masking was not required, but recommended for students who are attending in person.

Dr. Becky Smith 20:41

So, that change in Fall of 2022, I did not approve of that. At this point, Nigel had retired and his place on the target team was replaced with Ahmed Elbanna, and he and I discussed that and wrote strongly to the administration, both Summer of 2022 and Fall of 2022. To encourage that we would require masking in the classrooms, and we have continued to advocate for that throughout. We've pushed very strongly for more communication around the importance of masking and there was some communication that went out later, in response to our pushing. We wanted required masking. But at the very least, we wanted a stronger communication about how important the masking could be. So yeah, we were pushing back on that, at that point. We were not approving of the plan to drop masking in the classroom. And I still don't approve of it. I understand where the university is coming from, from a political standpoint, but from an epidemiologic standpoint, it does not make sense. Unfortunately, the CDC is not backing them up. And it's very hard. Early on, we could go above and beyond what the CDC recommended. Because early on, everybody was all in on doing everything they could. As time goes on, it gets really hard to go above and beyond what the CDC says. And after that first year, we started to see that pushback from the administration that if we said we wanted to do something, and they'd say that's more than CDC, and we'd say yes, but it's better. It would-- There's some tension there that that there's a lot of push to follow the CDC recommendations, which is unfortunate, because the CDC is saying that they're setting a floor. So, the CDC is saying this is the minimum, but you can do more, and everybody is saying but the CDC says that this is where we should be. Like, no, that's the floor. We can do more. But this is something that all epidemiologists have been struggling with for the last year, year and a half, is that when the CDC set sets recommendations, people have treated them as the absolute what we should do rather than the bare minimum.

Paul Gilbert II 23:24
Would a good metaphor be, it's like building codes where they're treated as if they're the be all end all, but they're actually the legal minimum in order for things to be considered safe.

Dr. Becky Smith 23:46
Yes, exactly. That’s exactly where we are. And unfortunately, the CDC has been taking people's responses to their bare minimum saying, Okay, we're going to meet people where they are and set a reasonable minimum, we think people can follow. And people respond to that minimum by going to that as this is the average. And so, then the CDC drops things to, again, meet people where they are, and it just gets worse and worse over time.

Paul Gilbert II 24:15
I feel a bit bad for priming the pump here, but trying to zoom out a bit. Overall, how do you feel about the university’s policies and procedures related to abating the pandemic?

Dr. Becky Smith 24:33
This year versus-- So the last two years, I think our university was the model. We did really, really well and I know it was not perfect, but considering our university and the challenges that we have, we did a really great job. Unfortunately, this year I am not thrilled. I'm not happy I think we could have done more, I think at the very bare minimum is requiring masks in the classroom. But testing needed to be more widely available. And we pared down the testing to just the one site, and limited hours, and no testing available on weekends. I know I've heard, it's hard for people in dorms to get to isolation on the

weekends, they're left in their rooms over the weekend. That's not okay. And I know that it's getting hard, as I said, to continue going, because the pushback on every level is, we need to move on and go back to normal, but we really should be going to a better normal. I feel like, and we're not there. So, I appreciate how much the university did for those first two years. And I really wish we hadn't lost so much of that push in this year.

Paul Gilbert II 26:20
So, I'm not sure where exactly to go from there, because I don't want to poke the bear too much. [Laughter from Dr. Smith] I will ask this. As a student, at the very least, I've noticed that there have been some gradual attempts to essentially walk back without necessarily describing it as walking back, the initial announcement of reduced testing, availability and masking in classrooms. They reopened a second testing location in on campus. And while they didn't go back to saying masks were mandated in classes, they put about, at least from my perspective, as strongly as they could a recommendation of wearing masks without explicitly mandating them. Do you feel like these addenda are the fruits of your as well as your team's labor in terms of pushing back on the initial announcements?

Dr. Becky Smith 27:34
I think they had something to do with it. We also had data on our side, which is that this Fall started with the worst case counts. With our minimal testing, we had the worst case counts of the pandemic this Fall. So higher just absolute number of cases found with on campus testing, which considering that we were providing free antigen tests, and very few people were actually testing that was extremely concerning. And we were able to point the university to that data and say that this is a problem. And we need to respond. And I think that that did break through, to some extent. I'm hoping that it isn't dropped. The problem that we've had throughout the pandemic is that everybody sees case counts come lower, and they say, “Great, we're done, we can stop.” And then we get a new wave. We will be expecting a new wave on campus in the next couple of weeks, because we always see one after midterms. So, I'm hoping that we'll keep these new guidances at least until we get through that post-midterm wave to keep it a little bit lower.

Paul Gilbert II 28:57
Switching gears, a bit, but still remaining in this SHIELD, general headspace. You talked about how your appointment previously was primarily research with service being the smallest in terms of expected time dedicated to it. How has the past few years of pandemic time impacted not just your overall role at the university, but where you see your career going?

Dr. Becky Smith 29:36
So, it certainly changed a few things. I mean, it gave me a whole new disease to research. So, we have a whole new area of research related to some of our COVID-19 work. One thing it did do is that it limited the amount of time and mental energy that I had for writing new grant proposals. And so, I have led very few grant proposals since 2020. And starting to get back to, I'm starting to do some more now and thanks to the fact that I have always been very collaborative, I do have new funds coming in. But it's been very hard to maintain my other projects, while also dealing with all of the COVID. It sucks up a lot of mental energy. It's not just the time, it's just that it's a lot of--. Writing a new grant proposal requires the ability to be creative, and that requires time to sit and think and talk with people. And that

that just hasn't been possible the last few years. So, I'm hoping that comes back now. But it has opened up as I said, new opportunities to do other types of research. And it, it shifted some areas of my research quite a bit because I got to work with people on the Social Science side, which I had never really gotten to work with before. And so, I have entirely new collaborations that were built through the shield program, that now we are getting funding and we're writing grant proposals together. And so, I'm not leading on those, but I'm getting to work with people that I had never met before, and who we now have great friendships and great collaborations. And we're building new, interesting programs. And in general, with my research, so my background is in cattle disease control. When I came to Illinois, Illinois does not have a lot of cattle. So, I had to switch into something else. And so, I had been getting into vector borne disease, and more ecological disease. But now, I've been doing more human epidemiology with COVID. And with some of the vector work as well. And so now I'm actually breaking into the world of human epidemiology, which is an entirely different world. And it's an entirely different community. And so, it's changed some of my research, some of my research focuses, I'm looking at things differently. But I'm also learning new techniques, and I'm able to bring new perspectives to my class. So that's been really great. It's adding a whole new dimension of complexity to my work that now I have to learn what's going on in an entirely new field that I hadn't been part of, which you wouldn't think human and veterinary epidemiology would be so separate, but they really are they do not talk to each other. So, I've got a whole new field to learn.

Paul Gilbert II 32:52
I mean, I would imagine so considering there are a variety of moral/ethical issues that, depending especially on the subjects in question, aren't asked as often versus if you're dealing with people. I mean, I've heard my friend who's a biologist do some pretty disturbing things to fruit flies, but because they only live for 21 days anyway. Hey, you can get away with it versus people would be very much up in arms, your gene splicing a baby, for example.

Dr. Becky Smith 33:35
You would think that that's the difference, but it isn't. The difference is that the funding. So the funding for veterinary epidemiology is mostly through USDA. And it really focuses on infectious disease control. Because infectious diseases are what threatens our livestock economy. It threatens our animal health. We deal with infectious diseases on the veterinary side. Funding for human epidemiology is mostly through NIH, and what most of the funding is for is chronic disease. So, we're working in entirely different areas of disease primarily, there are infectious disease researchers on the human side, but it's a very small subset, and they're kind of like off on their own. Most of human epidemiology is designing betters randomized control trials and working in hospitals and working on chronic diseases and developing new statistical methods for studying trial data. Whereas in the veterinary side, it's been a lot more modeling and a lot more looking at diagnostic test evaluation. And so, it's just a different focus of what we study within the field of epidemiology. So, you would think it's the ethics thing, but it isn't. It's really just what matters on the two different sides is different that the on the human side people are-- The big thing right now is causal inference. Can we use observational data to understand causation? Whereas on the veterinary side, the big things are modeling and diagnostic tests. So, it's just different focuses, different fascinations. And on the veterinary side, molecular epidemiology is huge. And on the human side, that's considered not even epidemiology, that's virology. So, it's just very different. It's fascinating. People who study the sociology of science really should look at this, because it's, we learn

the same things, we learn the same basic skills. But then because of who funds us and what is of interest within our fields, we take it in completely different directions, and we never talked to each other.

Paul Gilbert II 36:02
Let's start talking about some of the recognition that you, your colleagues, and the products of your labor have received over the last two and a half, almost three years now. Firstly, what was your reaction to receiving the Presidential Award Medallion from President Killeen?

Dr. Becky Smith 36:28
It seemed a little early to me, because we were still in the midst of it. But I understand that they wanted to do it while everybody was still paying attention to it. I don't care much about awards. They don't really matter that much to me. My focus has always been on getting stuff out there and in use. My lab's rule number one is that health is more important than science.

Paul Gilbert II 37:00
So, well, this kind of makes the second part of this question, not fulfill its relevance. But did you receive any other recognition? And or kudos for this? You mentioned that you received tenure during the pandemic, but I wasn't sure based off the timeline.

Dr. Becky Smith 37:23
Yeah, that was based on pre-pandemic stuff. Yeah. No, that that was August 2020. So that was pre-pandemic. The work that has, or the recognition that has been most important to me is one of the research trials that we ran on campus and Chris Brook in MCB and I put together very early on, was recognized. So, the director of NIH recognized it in his blog. He blogged about it. And it was used to set CDC policy on how people should use antigen tests. So, the recommend the from CDC that you use antigen tests to test four days apart, that's based on our research. That's the sort of recognition that I really appreciate. That we did research that set CDC policy that makes a difference. So that's what I really like. The other thing that has changed because of the pandemic that is continuing on now is that I have become known to journalists. And so, I get requests from journalists fairly regularly now. And not just on COVID-19 anymore. So, I've had to do several things on monkeypox, and most recently did one locally for Bobcat fever, which I had always done some for mosquitoes and ticks because journalists like to cover mosquitoes and ticks. But more journalists know my name now. And there's one in particular at the Chronicle for Higher Ed who talks to me regularly about COVID control in higher ed. And that's just the journalists know who I am now and they know how to reach me. And so, I hear from journalists more.

Paul Gilbert II 39:28
So, this actually flows well into the next question. Well, least from what I see most of the media coverage related to shield and epidemiology work in general has been positive. Others, including the New York Times, [Dr. Smith starts laughing] and XKCD have [inaudible] epidemiologists at the University for perceived inability to account for and I'm quoting "kids going to parties." What was your team's reaction to, not just that in comic in particular, but anyone who downplayed your knowledge or your ability to understand how people work?

Dr. Becky Smith 40:21
Yeah, so the New York Times and XKCD thing and that's we became the Twitter character of the day, at least among epidemiologists, for a little while. That was painful to watch, but what was really happening was, it was a pile on, and it was because of putting a physicist in our modeling team to lead our modeling team. And there was a misunderstanding among the community that we only had a physicist on the modeling team. So, the take on it was that this, and also, you have to be in in the mindset of epidemiologists at that point in time, which everybody was trying to jump in and become an epidemiologist. Like this is the point in time where all sorts of people who had no idea what they were doing, were jumping in and doing epidemiology, and they were doing it horribly. And so, we got this whole “Oh, my gosh, they had a huge explosion of cases, which they said they wouldn't have. And well, look, they've got a physicist as their modeler,” and somebody had found an earlier interview that he had done, where, with Sergei Maslov, where they talked about missing their earlier work, and they wish they could go back to their other work. And people said, well, this is just some arrogant physicist who doesn't know what he's doing. And he made a mistake. And now look at what happened. They didn't understand that I was part of it. So, I was not part of the criticism because they didn't know I was there. And so, once people started speaking up and saying, no, they are talking to an epidemiologist. It's not that they didn't put kids partying. And actually, there were kids partying in Nigel's model. He assumed that 20% of campus would party every weekend. What the model was missing was that people would break isolation to party. And we, didn't put that in because it did not occur to us to put that in. And when I talked to other modelers about it, they said, “No, I wouldn't have put that in the model anyways.” And this is a thing that modelers deal with all the time. I am a modeler, I didn't have time at the time to do the models so, Nigel was doing them. But I am a disease modeler. People always come back to the disease model and say, but you didn't do this. And you didn't do that. A model is a simplification. If you don't simplify, it can't be a model. So, you have to make choices about how you simplify. And people always second guess afterwards, people always come back and say, “Well, I would have put in this, I would have put.” You have to make a simplification choice. And so, it was hard at the time, Nigel took it really well, he actually considers the XKCD to be a badge of honor that he's got street cred now that he was in XKCD. But it was really just one of those social media misunderstandings, and it got blown out of proportion, and once people realized what was going on, everything calmed down again. At the time, it was horrible, though.

Paul Gilbert II 43:59
I mean, to be fair, I think it's one thing to account for people going to parties and getting sick by happenstance because I mean, going to a crowded frat party is, I think, the perfect breeding ground for a respiratory disease to spread. I don't think there was any real possibility on your part to account for people that are willfully breaking protocols in order to, not just continue going to parties, but I heard anecdotes about people breaking protocols, so they can go to class. And I'm just like, where are these students? Who are these people? Where they're risking their lives and lives of others to go to physics 101! Who are these people?

Dr. Becky Smith 44:54
Yeah, and one of the things that was very early on with the SHIELD team, I asked where the social scientists were, and we didn't really have any. We did eventually bring in some social scientists, which I'm very glad for, but the shield team was very tech heavy. And it was always very tech heavy. And this

is a, generally a problem with the University of Illinois, we do tend to focus on the tech solution to everything. So, I was the, well, Bill Sullivan, of course, he's on the social science side, but he was running the tech, the app development. So, he couldn't speak up as much. But he and I were basically the only people on the team with any social science anything, and I don't really have social science training, it's just, I've worked-- I've had enough in my class that I've learned a lot from them. So, I think that we did have some failures early on that came from not having social scientists on the team and focusing on the tech solution. And it's a truism in infectious disease control, but you can't tech your way out of an epidemic, you have to have the social science involved. And we did not have that involved early enough. And once you get going in a particular direction, it's very hard to change course, and very hard to add on other layers. So, we did bring in the social science more, but at that point, it was much harder. And even if we had had social science involved early on, which we were working it in where we could it is it--. We were asking for an entire behavioral change of an undergraduate population, which my sister's a juvenile psychologist, so I get to hear from her all about juvenile psychology, but they don't have developed prefrontal cortex. So, when you're saying who are these people who would make this choice to risk their life and risk the lives of others to go to class? This is just adolescent logic, that logic is not part of it. And if we had taken that into account, maybe we could have done something, but I'm not entirely sure we could have entirely dealt with the fact that adolescents will do things that are not logical, because that's not how their brain works. There were debates, and I can't talk about them, because this is very clearly--, we had debates privately amongst ourselves to make these decisions. But there were debates amongst ourselves where sometimes I had to speak up and say human behavior does not work that way, you cannot do it that way. Because the tech heavy approach was very much let's, let's throw tech at it and it will solve everything. It's like, that won't work.

Paul Gilbert II 48:14
To be clear, I'm saying this as someone who also does not have a fully formed prefrontal cortex, I'll just say, hey, as someone who recently left undergrad, if I have an excuse to not go to class, you bet I was taking it. Especially if there's a global pandemic, and everyone knows that is going on. I will be up in my pajamas, isolating, and watching my favorite comfort movie while eating Ben and Jerry's instead of trying to drag myself to class with a fever. But, you know, like you said, and especially when you're dealing with the juveniles, people don't necessarily behave in a logical manner. And you just have to try as best as you can to accommodate and plan for that.

Dr. Becky Smith 49:08
And one thing that—So, Jacinda Dariotis, who is a behavior and risk taking expert, she became one of our social science leads on the target team. And she and I have been working on a lot of things since then. And one of the things we focus on is that you have to understand people's motivations. So, for some students, their whole motivation to be in college was to have the college experience, meaning the frat parties and the hookups and all of that part of the culture. If this is their motivation, we can't convince them to do otherwise by appealing to protect your grandma. That's, that's not what's motivating them. When we talked to people about why they were making choices one way or another. The motivation that worked for them for that group of people was really, we don't want to have to send you home. You don't want to be sent home, you don't want to be taking classes from your parents basement. This is the motivation factor. Some of our communications were probably misreading, what is the motivation. For other people their motivation is, I've got to get all A's in physics, so I can get into

the engineering PhD program, so I can be the next Nobel Prize winning physicist. For them, the motivation of you're going to kill your classmates, this is not a motivating thing. For them, they need to know that they will be protected, and that they will do better in school if they stay home and isolate and recover and then come back to class. And we also ran into the problem that because of the way that the university is structured, we could not force faculty to abide by the guidance as far as giving students leniency in isolation. I know I heard the stories of faculty who said, I don't care that you're an isolation, you get a zero for this lab because you didn't come in. And this happens everywhere, that there are faculty who just cannot be bothered to consider health or safety for students or to make their classes more accessible. And we can't do anything about it, we could recommend as much as we wanted. We sent out recommendations, we sent out regular emails to faculty, to all instructional faculty. For Spring of 2021, we were sending weekly emails to all instructional faculty with extra information with PowerPoints that we had created, that they could share a PowerPoint slide with their class. But there were still faculty who were saying, I don't care that it's a pandemic, this is the way I run my class. And I will run my class this way. So, you can talk about student motivation, but they also, we had faculty who were working against us on some of these.

Paul Gilbert II 52:32
You talked about this a bit, about trying to find ways to communicate to different populations, in order to get across the severity, that this illness posed to the university community as a whole. Did you or anyone else on the team use social media as a means of meeting people where they are?

Dr. Becky Smith 53:04
So, there was a limit to how much the university officially was using social media, which I've really regretted. There was a great group at Boston University that was undergrad led. And because they were undergrad led, they were allowed to meet students more where they were. So, their official name was “Fuck, it Won't Cut It.” Which was fabulous! And then they shared, like how to do hookups in the time of COVID and things that the university, you know, we talked about messaging that we wanted to get out. And the university would say, we can't do that, that we can't talk about how to have a safe frat party, because we're encouraging underage drinking. You know, there were certain messages that we wanted to get out that we weren't allowed to officially as a university because of university policy about what we can and can't say and how we can and can't say things. So, I don't think we used social media the way we could have, simply because the university has such strict regulations on that. And I use Twitter a lot, professionally, but I use it professionally to interact with my colleagues. I don't have a huge following of undergraduates, and I had no desire to grow that huge following of undergraduates, so I stick to more talking horizontally then vertically with my Twitter. And I don't know of anybody on the team who was really involved in social media reaching out. That’s definitely one area that we fell down. And we did-- There were a lot of recommendations we made that the university just said, we can't allow that. Insurance won't allow it. Our policies on various things won't allow it. So, we did what we were allowed to do. And everything we did had to go through review. Everything that went out, went through review from the Chancellor's office.

Paul Gilbert II 55:27
So, my follow up question to that is, you as a faculty member, especially, had limits in terms of what you were allowed to do from a interactive standpoint. I mean, to you that “Fuck It Won't Cut It” example,

for a variety of reasons, I can see why the administrators would be apprehensive to repeating. But were there any students or postdocs that have a bit more of a gray area in terms of what expectations the university has for them in terms of decorum and behavior, that could have been a way of, for lack of better term leaking some of the desires of the team of talking to students, like their students and not talking to them, like they're fully grown adults.

Dr. Becky Smith 56:34
And to be clear, as a faculty member, I could have said, whatever I wanted to say. But I knew that the audience that I had on social media was not the sort of audience that we would have tried to reach. So as a SHIELD team member of everything I said, had to go through administrative review. But as a faculty member, I could say anything on my private Twitter, that they wouldn't have been able to do anything about they, I might have lost some, some contacts within the administration if I had been too controversial, maybe. But technically, the reason that I wasn't doing that is that I knew that it wouldn't reach the right people. I don't know of any students or postdocs or grad students who were really having those conversations. I know of other faculty members who were not part of the SHIELD team who were involved in a lot of pushback, but I am not well connected to the undergrad community. We did have the wellness ambassadors, but they were employed by the university, so, they were under the same kind of strictures. I only teach grad students, I only interact with grad students and postdocs. My connection with the undergrads is very limited. So, I monitored Reddit, the UIUC subreddit just to see what people were talking about. But that's about all I knew about.

Paul Gilbert II 58:20
Well, I'm glad you brought up Reddit because I wanted to talk about the UIUC subreddit, but I wasn't sure how to introduce that, at times toxic cesspool, into this conversation.

Dr. Becky Smith 58:36
Yeah, and I keep an eye on it. But just to see if people are saying things because it's very helpful. Sometimes we hear from there problems in our system like we would find out about problems in the way regulations are set up from there that we wouldn't hear about because people would--. Nigel and I often poked our noses in places that they didn't really want us, and that was one of the ways we would find out where we needed to poke. That we would hear about, you know, people are being treated badly. And if it was something that we felt was going to go against our control plan, we would poke our heads in and say, Okay, we saw that this is going on, and this needs to change. So, we monitored it, to see what people were talking about to see what was going on. But mostly just to get an idea of is there a problem we need to deal with?

Paul Gilbert II 59:40
So, relate to that. Yeah, we're going to put on our hindsight goggles, and be Monday morning quarterbacks, what are some of the biggest thing that, if not you would change, at the very least would be delivering the message in a different manner when it comes to your work with SHIELD and promoting some of the things that you desired people to do or not do it in order to help the community deal with this illness.

Dr. Becky Smith 1:00:20

So, I mean, I've already said we needed more social scientists involved from the very beginning to kind of guide that because I am not trained in social science, I dabble. But I rely on the experts there. There were some things that we discussed that we just didn't have time to put together that I really would have loved, which, especially that first year, having activities that were designed to be COVID safe. You know, we had all these grand ideas, we had an idea that we could take the testing tents on the weekend, and let RSOs reserve them and use the testing tents for their activities. So they could be in a tent, but be outdoors in a safer environment. We had all sorts of ideas of ways to incentivize behaviors that we just could not get implemented, or that the administration said, this is going to take too much, you know, we had talked about, you know, randomly selecting somebody who tested on schedule for the entire semester and giving them free tuition. Just having it be a lottery that if you follow the guidelines and tests on your schedule for the entire semester, you get entered in a lottery for free tuition. We had all sorts of ideas of ways to incentivize, ways to reach out to people where they were, that either the administration wasn't willing, or that just we didn't have time. And I think a lot of especially the COVID safe social activities, that first semester would have been so helpful. Like it took so long to get things like movies at the stadium. And the communications team did a great job at pulling those together. But there was so much early on, that was just the technical side of things that the social side got left aside. And I feel like if that first semester, especially that first August, September, we had had more activities that were outdoors that were with masks and with checking the app that we might have seen less of the illicit, I mean, there was still would have been illicit parties, but might have seen less of that. So that's something we definitely would have liked to have done. And I'm not sure how we could have done it. It's very hard when you're deep inside it to look back and say what could we have done differently, other than the very obvious that we needed the social scientists, and we needed to have a behavioral approach, and we didn't, very early on. And from a very technical perspective, we needed to onboard better that first week. I am sure you're talking to the diagnostic lab people, and that first week was horrific, and terrifying. And a lot of people got very scared because that first Monday of classes 19,000 people showed up to test. And that was just not anything that anybody was prepared for. And if we had planned ahead better and said okay, we're, you know, later semesters, we did an onboarding process where we delayed the start of classes, or we had online classes for two weeks, and everybody come early. And if we could have done that, but again, we were, we like to say we were building the plane as we were flying it, we really were we were trying to figure out everything all at once. So, all of that would have been really great. The other thing that I really wish we could have done earlier, is getting testing to the community. We wanted it out in the community. As soon as things had settled down on campus. We said okay, now how are we going to test the community? And we spent far too long going back and forth on who is going to pay for it, and how is it going to be paid for? And it would really would have been better if we had just gotten testing into the community from the from the outset. We did eventually, Spring 2021 get testing into schools. And once we piloted testing in schools, we were able to convince the state to start paying for community and school testing. And that's when we finally got it rolled out, but it shouldn't have taken a year. And I really regret that. I understand that the testing was expensive, and figuring out who's going to pay for it was not in my wheelhouse. But it would have been very helpful if we could have had that out earlier. And it would have, I think, built a lot more goodwill with the community, if we could have had that available earlier. Also might have opened the schools faster.

Paul Gilbert II 1:05:49

Or at the very least, in a more orderly fashion, just looking back as a former employee of Chicago Public Schools, how much of a nightmare that reopening process was.

Dr. Becky Smith 1:06:04
Well, and Chicago Public Schools never went with SHIELD testing. We tried. We tried, but they decided to go to somebody else. And that was a nightmare.

Paul Gilbert II 1:06:17
Yeah, putting it very mildly, a nightmare. You talked about this, very, very early on in the interview about how there are attempts to essentially go back to normal, but you would prefer us to go to a more new or at the very least better normal once we are out of, of pandemic times. Would you say that, as a university? We have more or less returned back to normal? And do you see that as being premature—Well, I already know, the answer is premature, but do you think that this is a failed opportunity at establishing a better normal?

Dr. Becky Smith 1:07:15
As a university, as a country. Yes, yes. I think that we had so many opportunities to learn from what we did. I know individual faculty may have learned. So, both my husband and I, we teach, we've learned how to make our classes hybrid so that students never have to attend in person. And that just makes the classes more accessible. And now that we've learned how to do it, we both say, why would we ever go back. So, we're just going to teach hybrid from now on, because we can. And the fact that so many faculty didn't take that, that they took the I don't have to teach hybrid anymore, as I'm not going to teach hybrid, and I'm gonna go back to having attendance requirements. And we could have learned so much about how to make the university more accessible, more open, better for all sorts of purposes. And as a country, there's so much that we could have learned here. The university in particular, one thing we learned trying to do research during the pandemic is that we don't have a clinical studies core. And we could have taken that as an opportunity to say, we need to build one. And we're going to build one and we're going to revamp our protocol process so that it's easier for people to get clinical studies going. We have a College of Medicine now. We should have a clinical studies core and we should build this program up. And we didn't. And I know I and several others of us, we were telling the administration if you want us to do more of this research, this is what we need. The study that I mentioned that got into the NIH Director's blog, we managed to do that because there were a lot of people whose labs were shut down that we could pull in and create our own program. And we used clinical studies core at UMass who were doing telehealth appointments to support us. And we said you know we could do more of these, if we had the administration, if we built this and this is what we would need to build and it hasn't gone anywhere and I think that's a missed opportunity. Especially since the College of Medicine is so new that would have been really great to build. But again, that that one takes money. The making the classes more accessible take the will of the faculty and that's left to the individual faculty members. But I think more guidance and more support and more pushing for let's take the lessons that we've learned and move forward with it would be great. And in a national level, I would have hoped that we would have learned that public health is underfunded, and maybe we should be funding public health better. But I think instead, what many municipalities have learned is that public health has some amount of power, and we should take that away from them because they might use it. And so, I think public health is going to come out of this crisis worse instead of better. Which shouldn't surprise me,

because that's what happens every time we have a public health crisis. But I could hope that we would learn something.

Paul Gilbert II 1:10:50
I mean, I think it goes further than that and just drop the public health from that statement. I feel like, especially in the time period that we're living in, every crisis leaves us not necessarily in a stronger position, but more divided than we were going into it. We're in this quote, unquote, post truth world where everyone is an expert and believes that gives them the ability to dictate what they want to do and what others can and can't do. Regardless of, of what people who dedicate their lives to this work actually have to say.

Dr. Becky Smith 1:11:41
It's been a standing joke within public health, though, because if there's a crisis, and you handle it well, people will say, Well, that wasn't so bad. You don't need this much money next time. And if there's a crisis, and things go badly, people will say, Well, you didn't do that very well at all. We need to give your money to somebody else. And so you get money taken away. So whether you do well or not, you lose. And that's just kind of a standing joke within public health, which is kind of black humor, I know. But we're used to that.

Paul Gilbert II 1:12:17
I mean, when you're dealing with things that could potentially end humanity on a day-to-day basis, you got to find ways in order to not lose it. Mean, gallows humor is definitely not the worst option out of the bunch.

Dr. Becky Smith 1:12:35
Yep. Pretty much.

Paul Gilbert II 1:12:43
You touched on this also fairly early on. And I wanted to say, a put a pin in that we're coming back to that later. You talked about how, especially at the beginning of the pandemic, where everyone was pretty much working from home, you and your, your partner had to balance responsibilities of being a researcher and a professor, as well as a parent. Could you talk more about what that transition was like for the both of you?

Dr. Becky Smith 1:13:14
Yes, so, March 2020 schools and daycares closed. And so, we had at that point, our daughter was, let's see, yes, seven. And our son was two he turned three in July. So, we are equal co-parents. So, we just talked it over. And I worked from 8:30 to 12:30. And he worked 12:30 to 5:30. And when I was working in the morning, he was in charge of the kids so he would work as he could, and then take care of the kids. And then when in the afternoons, I would work as I could and take care of the kids. Sometimes that was okay, I just can't get any work done today, I'm just going to be out in the yard watching the kids in the kiddie pool. And sometimes that was I'm taking a meeting on my phone while watching the kids in the kiddie pool. And sometimes that was--. There were definitely times that I was on a Zoom call talking to the Provost and the Chancellor while watching my two year old destroy the

room around me. And I just couldn't do anything because I'm trying to explain to the provost how we save lives on campus. So, that was definitely a challenge. Come August 2020, when my daughter started virtual school, we put my son back in daycare. We had kept him out of daycare for the summer because we said you know we can we're going to be watching our daughter anyways. It's better to save the daycare spots for the kids whose parents actually have to go to work. But once she started school and we were then supervising remote school while also working, that's when we put him back in daycare. And our daycare was very, very strong on their COVID controls. So, they had a scare early on. And so, they made it a rule that if you bring your child in, when you know they have been in contact, or you're waiting on a test result, you lose your spot, they are not welcome back. And so that meant that up until Omicron, they had no outbreaks. When Omicron hit, they finally started having outbreaks. But it took until that point, really. And that's when masks had been dropped, most places, still not in the daycare, they were still wearing masks in the daycare, but it was actually their outbreak was caused by that five day isolation period. That people were coming back in day six, still infectious. So, we had a good daycare for most of the time. But that first summer, it was very much. There was less that I could do because I was watching kids in the afternoon. And sometimes I was I was working while sitting outside watching the kids. And sometimes I was just not working. And luckily, I mentioned that that first year of the pandemic, I had four students defend their dissertations. So, all of my grad students were far enough along that they were working fairly independently, so I could leave all their projects to them and just check in once a week. And other projects just didn't happen. And there were there were definitely projects that we had that I still owe a project to some collaborators that was overdue when the pandemic started, and I can't get to it. So, some things dropped. There's a saying that, as a professor, you will drop balls, you just have to know which ones are rubber and which ones are glass. And so, you try not to drop the glass balls. Oh, you are muted.

Paul Gilbert II 1:17:18
I see. I thought I had pressed the key to unmute myself, but I hit the one next to it. What are some of the biggest takeaways you have about yourself as a person? And in the wake of what for everyone has been in some form or another a very traumatic experience.

Dr. Becky Smith 1:17:49
I always knew that I was not a terribly ambitious person. I know, it's very weird for a tenured professor and an R1 institution to say I'm not a very ambitious person. I am not an ambitious person for myself. And that was definitely made clear there were--. I had colleagues who, who built for themselves an entire reputation and built a following. And this has not been my interest that my lab rule pre-pandemic was that health is more important than science. And we really lived that. And so, I'm proud of that, that that our lab really is living our values, which is that health comes first. So, everybody, we prioritized. And when I say health is more important than science, it means the health of the people in my lab comes first, and then public health, and then science. And we really did that. So, it's nice to see that I did not give up on that in the face of a crisis. And I am not comfortable with being in authority. I very much prefer to be in the background. I do talk to a lot of journalists these days, and I'm happy to do it. But it's because I came to realize that talking to journalists, for me is teaching and I love to teach. So, I approach media appearances as a teaching opportunity rather than self-promotion. And generally just try to stay in the background and just, I don't like being in charge of things as much again and not something you're used to hearing a PI say I'm sure but I'd much rather just be in the background and

get my work done and support people who are doing what they want to do make sure people can do what they want to do. Yeah, and also that I know what I'm doing. It took a little while for me to get used to it, but I really do know what I'm doing I am good at what I do. And I can do it at a higher level if I need to, even though I don't generally want to, I really would rather stay focused on the small scale, and just supporting my students. But if I need to, I can do things, which is nice to know.

Paul Gilbert II 1:20:30
I mean, here's one that at the very least, I picked up on after talking with you for the last ninety minutes. A very healthy amounts of humility, because I'm not going to say that anyone that we've interviewed here—[Loud thud] I don't know what's going on upstairs, but it sounds painful. I'm not going to say that anyone that we have talked to has an inflated sense of ego as a result of this pandemic, I will say that people I've interacted with, who have done nowhere near as much in terms of saving the world as you and the rest of the SHIELD team have. Walk around like they are a gift to us all, and time and time again, you go, it's not about me, it's about the work that we do and saving lives. So, I don't want to be seen as the boss, I let people play to their strengths and prioritize their health it instead of trying to, quote unquote, get results. Very much a mentality of you have to put the oxygen mask on before you can help other people on the plane. And I don't know, it's something that's all of us need to, to keep in the back of our mind just to make sure that we are as helpful and healthy individuals as it possibly can.

Dr. Becky Smith 1:22:16
Yeah, it's,--. I try to live with my morals. And part of that is, is that it's not about me. It's about how I can help and how I can serve. And I am only an academia because I love to teach. Like, I like the research too, but I could have done that in government. The research that I do, there are people in government, including a former student of mine now, who do this work. And so, I could have done that. But I do love to teach. And so, I'm here because I love to teach and I love to help people. And that's, that's what I'm here for.

Paul Gilbert II 1:23:02
Do you have any final takeaways or recommendations for us, whether it's, here are some people that I think you should talk to? Or if you do nothing else for the love of God, please continue wearing masks?

Dr. Becky Smith 1:23:18
Yes, please continue wearing masks while inside. I have mine here. I'm in my private office. But if I leave my office, I'm wearing a mask. And I'm just about the only one in the department these days. Which, we're an infectious disease department we should do better. But. It's--. Definitely you should hopefully be talking to some of the administrative people as well as the scientists like the SHIELD team, the science team. We were talking the policy and all of that, but we weren't the people actually making it work on the ground. So, Nick and Alison Vance, Jody Silotto, Laura Wilhelm-Barr. All of these people who were really the people on the ground making it work, you absolutely need to talk to them. Because nothing we came up with would have happened without them and their support. Because and I mean, honestly, they would come back to us and sometimes and say you can't do that. It's just not possible. And so, they kept us grounded in reality. So, one of my regrets you asked earlier about the Presidential Medallion. There were not enough administrators on that list. It was all the people who were put up in front of here's our science team and here's our leaders. There were not enough of the people who

actually made it happen there. You say humility, it's quite honest humility that I could not have done anything that I did without the IT staff and I could not have done anything I did without the communication staff. Otherwise, it would have just been me sitting in my office making recommendations that go nowhere, which is what happened to most of my colleagues. So, most of my colleagues at other schools were, were making the same recommendations that I was, and they would make them into the void, and nothing would happen. And so, the fact that that entire team was put together to support us, that's, that's why the SHIELD team worked.

Paul Gilbert II 1:25:46
Right, we've asked all the questions that we have prepared for today. Thanks, again, for taking time out of your busy schedule to speak with us. Jenna, do you have anything that you want to add before I stop the recording?

Jenna Courtade 1:26:04
Thank you for talking with us.

Dr. Becky Smith 1:26:09
Of course. And like I said, in the email, I don't know if I have any documents that you don't already have, that would be useful. A lot of what we did was not based on documentation.

Jenna Courtade 1:26:25
We're talking with other members in SHIELD, so hopefully, whatever there is, we can get covered.

Dr. Becky Smith 1:26:35
Yeah, and like the IRBs, those are in a shared Box folder, I can add one of you to the shared Box folder, if you want to see all of the IRB documentation for all of the studies that are going on. I do everything with shared box folders, so.

Paul Gilbert II 1:26:52
I mean, that might actually be helpful if you could direct us to which ones are COVID specific. Because this is very much. I'm getting my cliches mixed up. But this is very much like how the things that we see as deliverables are being made. And I'm not sure if many people at present are really familiar with all the steps and procedure sets that go between conceiving of an idea, and then finally, the putting in front of people, such as case of the antigen testing. There's a lot of things that have to first be completed before we reach that point. And we just lose sight of that from time to time.

Dr. Becky Smith 1:27:55
So, I'm happy to add you to that that folder so you can see all of the all of the IRB iterations for all of the different studies that were going on campus and all of that as a matter of public record, but it's all in one place at least. Because that's about the only thing that I have the that's actually in a shareable format because all a lot of our deliberations were very specifically kept off paper. Because we were debating things that there was a lot of uncertainty and we really don't want people going through and trying to nitpick.

Paul Gilbert II 1:28:37
Fair enough! All right. I'm in ending the recording.