COMMONWEALTH OF PENNSYLVANIA
HOUSE OF REPRESENTATIVES
HOUSE HEALTH COMMITTEE
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IN RE: LYME DISEASE AND TICK-BORNE ILLNESSES

PUBLIC HEARING
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BEFORE: KATHY L. RAPP Chairman
Marcia M. Hahn, Rosemary M. Brown, Whitney Metzler, David H. Zimmerman, Brad Roae, Mary Jo Daley, Pamela A. DeLissio, Paul Schemel, Jerry Knowles, Dawn W. Keefer, Michael H. Schlossberg, Johnathan D. Hershey, Wendy Ullman
Members

HEARING: Monday, September 9, 2019
Commencing at 10:00 a.m.

LOCATION: East Stroudsburg University
562 Independence Road
East Stroudsburg, PA 18301

WITNESSES: Nicole Chinnici, MS; Commissioner Matthew Osterberg; Michele Cassetori; Harriet Loizeaux, MSN, FNP-BC; Jeffrey Jahre, M.D.; Dr. Donald Eggen

Reporter: Karissa Kross

I N D E X

P R O C E E D I N G S

CHAIRMAN: Thank you, ladies and gentlemen, for attending today to hear about this very important topic that affects many, many of our citizens in the State of Pennsylvania. I'd like to say a special thank you to the University for having us here, for all the work that they have done in the research lab. And a special thank you to Representative Brown, for helping us arrange this hearing here today.

My name is State Representative Kathy Rapp. I hail from Warren County. I represent the 65th Legislative District. It's the fourth largest district geographically in the state. I represent all of Warren County, half of Forest, and parts of Crawford County.

So again, welcome. I don't have - Representative Rosemary Brown, if you want to say a few remarks, and then we'll have the rest of the members. And to my right is my staff person, Executive Director Whitney Metzler, from Harrisburg. So thank you, Whitney.

It's the staff that usually does a lot of the work here, so that - putting the agenda and the testifiers together. So I always like to thank my staff for all the hard work that they do. And Nicole Sidle, who was my research analyst and who just became one of our new Executive Directors for the

Professional Licensure Committee in Harrisburg.

So congratulations, Nicole.

So Rosemary?

REPRESENTATIVE BROWN: Thank you, Chairman Rapp. Again, thank you very much for coming into Monroe County and bringing the Health Committee members here. I know you traveled far. I know there's many members here on this panel that traveled far to be here.

So I thank you all for your attention to the Lyme disease and the tick-borne illness, and being open to the information that's going to come forth today, and hopefully offer us some additional ideas on how we may be able to better support this issue that we're having in Pennsylvania.

And you will hear today that - and many of you know that are here already that we have a number one ranking for Lyme disease in the country of reported cases. So we are at a significant risk. Our people are very much concerned about this. We are concerned about this. So that's why the focus is here. So again, that's really a thank you for the House Health Committee for being here and all the members.

We have done a lot of work. Right now we have major numbers on here supporting. It's $3,000,000 that's been appropriated to the Department of Health for Lyme

disease and tick-borne illnesses. $500,000 of that is something that I started back about three years ago when my son had a tick on him. And I had pulled the tick off of him and brought it to the tick lab here at East Stroudsburg University.

And my background is a little bit of in the pharmaceutical world, so in antibiotics. So I have a little bit of an idea of some of the pathogens and some of the medical side of things. So they said to me, what would you like tested? And I said, well, definitely Lyme disease. Okay. And there was a cost for a Lyme disease test. And then additional pathogens were an additional cost.

And so it wasn't cheap, but I understood the value and the importance of having that test done to my son's health. But I did walk away that day as I left the tick saying, boy, I don't want to see anybody have to walk away and - because this is a tool. This is a tool for health, for the patient, and for their doctor. And I couldn't help but think how much we don't know about what's inside these ticks. So the epidemiology or what we call the pathogens is the really importance piece in there.

And so I came up with the idea of possibly subsidizing the tick testing. It started with a grant, with $500,000 that the members supported. And then we went

further to have that $500,000 included this year in the Department of Health budget. And many of the members are very excited, have been utilizing the paperwork here from East Stroudsburg. And we'll hear more testimony. But I think that's a really important, piece of the information that everyone should be aware of, that the legislature and the State has supported, it's worked very hard on.

And you'll see some other pieces of legislation that I have and I'll put those out later on. But I just want to say thank you for being here. And I hope that we garner some additional ways that we can assist in this disease.

Thank you very much, Chairman.

CHAIRMAN: Thank you, Representative Brown. And thank you for all your hard work on this lyme issue. So we will move down to -.

REPRESENTATIVE KEEFER: I'm Representative Dawn Keefer. I'm a member of the Health Committee and I'm from York County and part of Cumberland County. And I represent the 92nd State Legislative District.

REPRESENTATIVE HAHN: I'm Marcia Hahn, from the 138th District in Northampton County. Like Rosemary said, a lot of constituents come in. We had the pamphlets from ESU in the office, so people have them. And it's a great tool for us to have and to use. So thank you.

CHAIRMAN: Representative Zimmerman, would you like to -?

REPRESENTATIVE ZIMMERMAN: Yeah. I'm Representative Zimmerman from the Northeast part of Lancaster County. It's kind of the New Holland, Ephrata area, and also part of the northern county.

REPRESENTATIVE ROAE: Good morning. I'm Representative Brad Roae. I'm a member of the Health Committee and I'm also on the PASSHE Board of Governors. So I took an opportunity to drive around the campus. Very beautiful campus. I really liked what I saw.

REPRESENTATIVE DALEY: Good morning. I'm Representative Mary Jo Daley and I am a member of the House Health Committee. And I represent an area in Montgomery County right outside of Philadelphia. Nice to be here.

REPRESENTATIVE DELISSIO: Good morning. Pam DeLissio. I represent the 194th parts of Philadelphia, Montgomery Counties. And I've been on the Health Committee for eight and a half years.

REPRESENTATIVE SCHEMEL: Good morning. I'm Paul Schemel. I represent a portion of Franklin County, which is down in the south central portion of the state, right against the Maryland line.

REPRESENTATIVE KNOWLES: Good morning. I'm Representative Jerry Knowles, 124th District. I represent

a portion of the Berks, Schuylkill and Carbon Counties.

REPRESENTATIVE SCHLOSSBERG: Good morning, everyone. Mike Schlossberg, 132nd District, City of Allentown and South Whitehall Townships in Lehigh County.

CHAIRMAN: Okay. Thank you, members. Now, formally I will ask my Executive Director to take the rollcall of the hearing.

MS. METZLER: Representative Rapp?

CHAIRMAN: Here.

MS. METZLER: Bernstine? Borowicz? Cox? Gaydos? Hahn?

REPRESENTATIVE HAHN: Here.

MS. METZLER: Hershey? Kaufer? Keefer?

REPRESENTATIVE KEEFER: Here.

MS. METZLER: Klunk? Knowles?

REPRESENTATIVE KNOWLES: Here.

MS. METZLER: Owlett? Roae?

REPRESENTATIVE ROAE: Here.

MS. METZLER: Schemel?

REPRESENTATIVE SCHEMEL: Here.

MS. METZLER: Zimmerman?

REPRESENTATIVE ZIMMERMAN: Here.

MS. METZLER: Chairman Frankel? Daley?

REPRESENTATIVE DALEY: Present.

MS. METZLER: Dawkins? DeLissio?

REPRESENTATIVE DELISSIO: Here.

MS. METZLER: Fiedler? Gainey? Innamorato? Kinsey? Schlossberg?

REPRESENTATIVE SCHLOSSBERG: Here.

MS. METZLER: Ullman?

CHAIRMAN: Thank you. Thank you, Whitney. And if you have a copy of the agenda - and I think there are some extra ones here on the front table. Please feel free to walk up and take one.

The agenda today, if you have the agenda in front of you, many times when we have hearings, we will ask questions after each testifier. But today, when we're looking at the time frame, I am going to ask for a flow of all of the testifiers to speak. And then we will have questions and comments from the legislators at the end of the time.

So at this point in time, I would ask that the Laboratory Director of the University Innovation Center, Nicole Chinnici, please present to us and welcome. And we are very much looking forward to everyone's testify - testimony today. So thank you and you may proceed.

MS. CHINNICI: Good morning. I'm Nicole Chinnici, Director of the PA Tick Research Lab of East Stroudsburg University, just downstairs. And thank you guys for all making the trip out here today to talk about

ticks and tick-borne diseases.

Just a little background. You may have already heard this a little bit today, but Lyme disease is the most common infectious disease that we have in the United States. It's a rapidly growing health concern and it needs immediate attention. The topic that you're addressing today is very important. It's important for our Commonwealth. As Pennsylvania, since 2011 - since 2011, we've been the leading state for tick-borne disease and Lyme disease specifically.

So since 2005 - a little background of the tick research lab downstairs. Since 2005, we've been testing ticks for a fee from the public. As Representative Rosemary Brown talked about, she brought a tick in from her son that we tested. And it was just in 2018 that we received a half a million dollars from the Health and Human Services Committee to start the free tick testing.

We started April 1 of 2019 testing ticks for free for Pennsylvania residents. Since we started this grant just five months ago, we've tested 6,700 ticks from Pennsylvania. We've collected a lot of important data from these ticks. And I'm going to present a lot of that data to you today.

All of our information we track live on our website. So if at any point in time if you want to get

this information offline, you can go and it's ticklab.org. We have it live for the public. We have it live for the government. Anybody who would like to get our data, it's all there for you.

This service provides important information. It's giving the physicians important information on the tick bite. It's a diagnostic tool that they can use to help diagnose these symptoms before they occur. So sending the tick in within - we are very proud, within 36 hours of us receiving their tick, we have a report back to you. We're sending it via e-mail and we're sending a text message.

So physicians can then use that information to guide that treatment and even to look further into what human diagnostic tests that there are, because it's not just Lyme disease in our state. And I'll give you information on that as well.

So now I would like to take the time just to talk a little bit about our data. And this is the most important thing. Everyone in your little folder, I've given you a little summary. I'm going to present it in the back for the public of all of the data that we've collected. So first I want to start with the tick activity in Pennsylvania. So we collected tick activity across the state, to really see what ticks were getting most common.

And no surprise, the Blacklegged deer tick is the most common tick that we had submitted for testing with 68.4 percent. Next was the American dog tick. We had 27 percent of the ticks submitted American dog ticks. And then four percent of them were Lone Star ticks. So Lone Star ticks are starting to move in the northern states. They started in the southern states and have started to move north, especially even as far north as Maine. So we're keeping track of that tick because there's a lot of diseases associated with it.

In these ticks we have an average infection rate of 51.8 percent. So that means over half of the ticks that we're testing are infected with a disease. So now we're looking at whether or not we're exposed to - it's not even just Lyme disease. It's any tick-borne disease.

The highest infection rate was identified in North central PA, at 59 percent of ticks were infected. The lowest was in Northwestern PA, but not too much lower, at 47.7 percent of those ticks.

We're also able to track the activity of ticks. And why is this important? If we're tracking the activity of ticks, we can give out public health alerts on which ticks that they're looking for. Each tick has different colors on them. They have different identification.

They're also associated with different diseases.

So giving this information to the public helps them give another layer for protection. So we're tracking this. And you can see here on the back, there's a little graph there showing the activity. And it even shows when the adult Blacklegged tick and the nymph tick change in their lifecycle -.

So the most common disease that we identified was Lyme disease, which is no surprise. And we split the infection rates between the adult ticks at 46.4 percent and tracking them within the nymph ticks at 30.7 percent.

So you're probably asking why did we look at the different life stages to see the infection rate. It's really important when you're coming to diagnose Lyme disease and other tick-borne diseases, it's suspected that the tick has to be attached for 18 to 24 hours in order to transmit a disease.

So the nymph tick is the size of a poppy seed. It's very tiny. The average engorgement on the nymph tick was 26 hours. So that's over 24 hours. So over 24 hours was the average amount of time that this tick was engorged on our residents in Pennsylvania, and 30 percent of them are infected.

On the adult ticks, their average engorgement rate was 22 hours and their infection rate was 46 percent. So almost 50 percent of the time these ticks will be

carrying a disease like Lyme disease.

In dog ticks and Lone Star ticks, the most common tick-borne disease that we saw was Rickettsial species. And Rickettsial species are potential agents of Rocky Mountain spotted fever. And I know it's named Rocky Mountain spotted fever, so you're thinking it's Rocky Mountains, but we have the highest rates of Rocky Mountain spotted fever on the East Coast of the United States. We had 11 percent of our ticks tested positive for these diseases.

So really understanding the prevalence of these diseases is important for physicians when diagnosing tick-borne diseases. They should understand what diseases are in their county and that's the data that we're collecting.

We have adopted the county level. And like I mentioned earlier, we tested ticks from every county of Pennsylvania. And we're almost at a hundred ticks per county. Sometimes we get a lot more of them, at least a hundred. The symptoms among diseases may present the same, but without proper and accurate diagnostics, it's going to be hard to identify what it is. And as you're seeing from our charts, it's not just Lyme disease. We have high rates of Anaplasmosis at 19 percent. We have Powassan Virus at three percent, Babesiosis at 2.7 percent.

So what does this mean? We have co-infection rates of 12.6 percent. So that's saying that our ticks, 12.6 percent of them are carrying more than one disease. So if you're exposed to more than one disease, it can become very complicated in getting diagnosed and even treated. Especially if these diseases are different in - if they're bacterial, viral, or protozoan, because you can't treat a virus or protozoan infection with antibiotic.

So this becomes more complicated for patients for recovery and for treatment. And even further for physicians to diagnose them because they keep having symptoms, they're sicker, and they're typically sick for longer.

So through this program we're also tracking a lot of important information on exposure, so where people are being exposed to in the environment.

And why is this important? This all leads to educational information for our residents. A lot of people really think going to State Parks and hiking is probably where they're going to get their ticks. But when we collected our data, just through the survey, we found over 50 percent of the people submitting ticks were submitting ticks from residential areas.

So that means people are being exposed to them in their own back yard. And they're not usually aware of

this. They don't really understand that just mowing their lawn is where your greatest risk for a tick bite is going to occur.

So based on all of the research that we've collected - oh, sorry. I missed one thing. Ages two to ten - my apologies - are at greatest risk. So we collected age groups over what activities they're doing. And ages two to ten were at highest risk. And what activity they were doing, why they were outside was playing in the yard. So we have children ages two to ten playing in the back yard at greatest risk for ticks and tick-borne diseases.

So with that now, the recommendations and the data that we've collected, I summarized some things that we can do moving forward with some of the funding.

The first one is to continue funding this tick testing program. Why? It's giving important information to our physicians and our residents, as well as information to our public Health Departments on what's inside of our ticks. We're tracking it because it will change, and it's changing dramatically each year. And so we're tracking that.

The second would be to start to bridge that gap and develop some healthcare provider program. So training our physicians, our nurses, our health practitioners, anybody who's certified in Pennsylvania, so that they

understand what is Lyme disease, what the symptoms are, what they should be looking for, and that it's not just Lyme disease and that there are coinfections; how they should get a human diagnostic testing. We had a meeting request diagnostics last week and we've come to the conclusion how hard it is to pinpoint that 24-hour time when you should actually get that testing done. So there's a lot of information our physicians don't know.

Develop some educational and funding strategies for schools in high-risk areas. So we're identifying these high-risk counties, what the infections are. So what strategies can we have to protect our children from two to ten? Sometimes if a tick's missed by their parent, the school nurse or the teacher might find it. So they should be aware of what they should do and how they can protect their child.

And begin funding some integrated pest management strategies. So what I mean by that is looking at how we can treat the environment or the animals in the environment to maybe reduce those risks. And I'm thinking small studies, local studies.

There's some studies going on at University of Maryland and - some research down there in one county looking at maybe treating the white-tail deer population to decrease our ticks. Or potentially vaccinating our mice,

so that would help to decrease the Lyme disease that we have in our mice.

So there's a lot of different things that we do, but we're just not a hundred percent sure on what would work for our state, because each state has different geography. We have different wildlife populations and different ecology associated with them. So we would have to pick a strategy that would work best for our state.

So in conclusion, based off my expertise and everything that I've done with Pennsylvania and across the state, going through education, I think that these are some really good strategies really help reducing the numbers that we have. This tick testing program has really given a benefit for our residents to really understand what they've been exposed to. And give them a piece of tool to advocate for themselves.

But we don't want to see our individuals showing up to a physician when their first response is their doctor, and their doctor is who they trust. And they go there with a tick bite and the doctor may pull it off and throw it in the trash can, when that tick bite can really give us important information from the early diagnostics and exposure, to even collecting information about our state and infections that are there.

So I want to thank you for your time. I'm going

to end my testimony with that and questions at the end.

CHAIRMAN: Yes. Thank you, Nicole. That was very informative and I'm sure that there will be members who possibly will have questions for you at the end.

So our next testifier is Matthew Osterberg, who is Pike County Commissioner. Commissioner, you may proceed when you are ready.

COMMISSIONER OSTERBERG: Thank you. First, let me thank Rosemary Brown and the Committee for allowing me to testify and talk to you about the Pike County Tick Borne Disease Task Force. And welcome to Northeastern Pennsylvania.

Although we're in Monroe County, I hail from a little bit further north in Pike. My county has experienced a significant increase in confirmed cases of Lyme disease in recent years, from 13 in 2012 to 114 in 2016.

To proactively address this issue, in July of 2013, some concerned citizens, spearheaded by retired educator Mikki Weiss, formed the Pike County Lyme Disease Task Force, now known as the Tick Borne Disease Task Force. The original intent was to bring awareness to local residents on the complexities of the issue and ways in which more effective medical treatment can be obtained.

From its onset, the Task Force was intended to be

a model initiative that could be replicated in other communities facing our same challenges. And we continue to share our story and educational resources so they might assist other counties and communities seeking to build their own responses to this very serious health issue.

In your packet today you'll see several examples of outreach pieces that we have found to be effective in Pike County. I'll talk more specifically about a few of these later in my presentation.

Regarding the formation of the Task Force as first staffed with the help of Mikki Weiss and founding volunteers, the Task Force identified a comprehensive network of community groups, business people, and professionals, educational institutions, and targeted segments of the local population to activate and engage in productive dialogue.

The idea was to share information between the Task Force and these groups so that they would become articulate on the issue of tick-borne diseases and would be ready to implement practices or recommendations as they became available from Pennsylvania Department of Health Lyme Disease Task Force.

Since its inception, the Task Force has worked to increase the number of tick-borne illnesses to public awareness about the prevalence and dangers of tick-borne

diseases, as well as proactive steps that people can take to protect themselves from infection while enjoying the outdoors.

In June of 2014, the Task Force held an educational seminar on tick-borne diseases for our county's Alliance of Community Associations. An article about the seminar in the Pike County Dispatch newspaper prompted microbiologist local resident Dr. Robert Ollar to contact the Task Force to offer his expertise. Dr. Ollar became involved with the Task Force and presented an overview of tick-borne diseases to the Commissioners. From there, we recognized the seriousness of this crisis and embraced it as an important county issue.

In May of 2015, the County Commissioners passed a resolution that appointed the Pike County Tick Borne Disease Task Force as a volunteer committee of the county to provide up-to-date information on prevention, diagnosis and treatment. The Task Force is currently administered by our county Planning Office, under the direction of Michael Mrozinski and community planner Brian Snyder.

Throughout 2016, the Task Force focused on outreach presentations forming collaborative partnerships. And some highlights included creation of a Task Force landing page on the county web page, where educational resources and upcoming events can be shared, a public

service announcement called What You Don't Know About Lyme Disease Can Kill You. Various meetings and workshops with community groups, such as the Pike County Council of Wellness, the Milford Riding Club, the Wayne Memorial Hospital State Health Insurance Program prevention initiative breakfast.

The Task Force worked with local Penn State cooperative extension on tick suppression symposiums. A county-wide survey was conducted via the county's website to help determine the extent that tick-borne diseases are impacting our residents and visitors.

Dr. Ollar gave testimony to the Pennsylvania Legislative Health Committee in Harrisburg. And the Task Force developed a model prevention protocol at Delaware Valley School District.

To date, outreach has resulted in productive partnerships with Pocono Environmental Education Center, Delaware Valley School District, Pennsylvania Department of Health, East Stroudsburg University, Wayne Memorial Health Systems, Hemlock Farms Conservancy and Penn State Extension, among others.

A cornerstone of the educational outreach by the Task Force is an easy to understand Tick 101 brochure, which is included in your packets. The brochure contains basic information about ticks and tick-borne diseases. It

was produced from the funding from the Pike County Conservation District and the Commissioner's Office. Among - approximately 8,000 copies have been distributed to local residents.

In collaboration with Delaware Valley School District, a protocol was developed for school nurses to use when a student reports an embedded tick. Prior to the protocol, a nurse would remove the tick and dispose of it without informing a parent or a guardian. Through

The new protocol, guidance is provided on proper tick removal and treatment of the affected area of the skin. Nurses are also instructed to contact a parent or guardian to share the Tick 101 brochure and to inform the parents that he or she may take the tick to be tested.

One of the major achievements of the Task Force is the completion of scientific research that has given insight into the type of ticks and diseases present locally. The Task Force commissioned a pilot study of the county seat of Milford Borough, funded by the Tick Borne Disease Support Network and the Pike County Commissioners.

Northeastern Wildlife DNA Laboratory of East Stroudsburg University tested a hundred Black-legged ticks collected at three sites. The study, which was completed in June 2018, showed that 51 percent of the collected ticks carried at least one tick-borne disease, and 11 percent

were coinfected in two or three tick-borne diseases. The highest infection rate identified was Lyme disease at 37 percent. A primary recommendation included screening for all possible tick-borne diseases by local doctors to ensure accurate diagnosis.

These results prompted the Task Force to call for a county-wide study, which is again being conducted by Northeast Wildlife DNA Laboratory of East Stroudsburg University. This study, which is in progress, is funded by the Delaware Valley Educational Foundation, Lyme Disease Association and the Pike County Commissioners. It divides Pike County approximately 546 square miles of land into nine collection grids, from which 100 to 200 ticks from each grid will be collected and tested.

In addition, ticks will be collected from Milford Borough to compare pathogen changes over time and to test for the Powassan virus, which was not included in the pilot study.

The Task Force maintains open lines of communication with elected officials, such as Michael Peifer, Representative Rosemary Brown and Senator Lisa Baker. These relationships have fostered an ongoing dialogue on legislation surrounding issues such as continuing education for doctors and mandates that require health insurance companies to pay for tick-borne disease

treatments.

An exciting recent development is the collaboration with Wayne Memorial Hospital, which established a tick-borne disease wellness center in Lords Valley; a first of its kind in the Commonwealth. Here, Lyme literate healthcare provider Harriet Loizeaux provides evidence-based treatment, diagnostic testing and verification of tick-borne diseases, and advice for management of symptoms for previously diagnosed patients.

Finally, the Task Force was recently honored with a 2019 Northeastern Pennsylvania Environmental Partner Award, which recognizes its strong partnership with numerous organizations to raise the level of awareness and education regarding ticks and tick-borne diseases through school nurse tick removal protocols, legislation and testing.

The Task Force meets monthly and continues to work to educate Pike County residents and visitors and to share resources with others seeking to tackle the tick-borne diseases challenge in their own communities. Soon we will be developing a document on suppression to be presented when the surveillance study is completed.

The role of educator on this public health issue is one that needs to be handled delicately. While we want to alert our neighbors and friends and visitors to be aware

of ticks, we do not want to alarm them. Pike County's major industry is tourism and we want people to enjoy the outdoors, but we also want them to be prepared. So our mission will continue with education being our top priority. We'll also advocate for the state to develop legislation that stresses programs to schools and doctors.

So thank you very much for this time. So you know, those members that meet once a month on the Task Force are just residents of our community that felt so - that this issue was so important that they continually meet every month. This is doctors, and some attorneys, there's educators.

There's people from every aspect of Pike County and the like. But they realize that their friends and families who are suffering from this. So I thank you for the time to give you this important information about Pike County and what we're doing moving forward.

There's lots of information in here you'll see about support groups. Along with Wayne Hospital, there's suppression programs. As was just spoken about, about the most people that are affected by ticks and diseases in their back yard. So in Pike County, we're realizing that we need to teach and educate the residents of how they can eliminate that in their own back yards. So thank you.

CHAIRMAN: Thank you, Commissioner. That was a

very nice presentation. And I think we are all impressed with the tick remover in the packet. I've never seen one before. So thank you for that.

And you'll be staying for the questions?

COMMISSIONER OSTERBERG: I will, yes.

CHAIRMAN: Thank you. Our next presenter at this time is Michele Cassetori, who is the Director of Education and Outreach, Pennsylvania Lyme Resource Network.

Michele, proceed when you are ready.

MS. CASSETORI: Okay. Thank you. Good morning.

CHAIRMAN: Good morning.

MS. CASSETORI: I just want to point out that I included this colorful infographic in your packets this morning, which my testimony is attached to that. And there are some extras up here for the public attendees as well. So I just wanted to bring that to your attention.

Thank you, Chair Rapp and Representative Brown, and all the House Health Committee members for allowing me to speak this morning. It's really a critical Pennsylvania health issue.

My name is Michele Cassetori and I'm an occupational therapist with 29 years of experience. I work as a Director of Occupational Therapy for a provider serving four counties. I'm an adjunct faculty member at Misericordia University and I'm a Pennsylvania Lyme

Resource Network Board member. We know now that Pennsylvania is number one in the nation for confirmed cases of Lyme disease. But I think it's also important to note that 30 percent of the Lyme disease cases in Pennsylvania are children, our most impacted group.

As an occupational therapist, I've seen the effects of illness on patients. But truly, it was seeing the suffering of my own children at home that had the greatest impact on me as a mother and as a healthcare provider.

I can tell you that in the past year in my practice I've seen an increase in the number of patients referred for therapy due to the effects of Lyme disease. Many of them diagnosed late, which led to significant health issues.

A woman in her 40s, now wheelchair-bound, desperately trying to keep her clerical job, but struggling due to extreme fatigue, muscular coordination difficulties, and cognitive struggles.

And there are my own two daughters. My oldest at the age of 20, a conditioned college distance runner suffering from very scary cardiac symptoms; chest pain, shortness of breath, just from walking across campus to class.

And then there is my younger daughter, who was

yet to complete a full traditional year of high school due to debilitating fatigue and neurological symptoms.

In 2018 I think it's important to note that the World Health Organization, whose job it is to study the science, to review the science; they added several ICD-11 diagnostic codes that represent the progressive manifestation of Lyme disease. Diagnoses like carditis, dementia and many others.

I've seen at home and in the clinic the effects of Lyme disease, physically, a loss of mobility, strength, and coordination. Cognitively, deterioration with difficulty concentrating, memory problems, difficulty with problem solving, even direction following and speech can become impaired.

Psychologically, this leads to depression, anxiety with panic attacks. I've even seen obsessive compulsive disorder and anger issues. Socially, this leads to isolation, due to an inability to engage in conversation, difficulty attending social events and activities, a loss of role identity.

As a professional, I know from experience that the most successful treatment plans are those designed that are based on the patient's stage of illness, level of dysfunction and input from the patient, the physician and that are covered by insurance.

The treatment approach for patients with Lyme disease should be no different. Alison DeLong, a biostatistician from Brown University, concluded a careful statistical analysis of the four National Institute of Health treatment trials for Lyme. And she concludes, quote, for some patients with Lyme disease, retreatment can, in fact, be beneficial, end quote.

Dr. Ying Zhang, a professor from John Hopkins University, has recently started studying Lyme disease. He's a world expert on infections, persistent infections, specifically tuberculosis. And in line, he found that the more prolonged the infection or delayed the diagnosis, the more likely a persistent, difficult-to-treat infection would develop.

So it's just like with TB. The longer it goes untreated, the much more difficult it is to get rid of. He also studied the antibiotic recommendations for Lyme. And he found that they are unable to kill the persistent forms of Lyme.

He concludes that the guidelines are too simple and only address early infections. They are not effective in treating the persistent forms of the disease.

In the spirit of Act 83, patients and healthcare providers should be educated and have access to a broad spectrum of treatment options for all stages of Lyme

disease, not just acute early stages. A spectrum of treatment options with insurance coverage would allow patient choice and opportunity for best patient outcomes.

We know when it comes to Lyme disease that many patients with Lyme are often diagnosed late. When caught early, 20 percent of those treated do not recover with short-term treatments. And those that are diagnosed late, 40 percent do not recover with short-term treatment.

That leaves a lot of people chronically ill without insurance coverage for the longer treatment they need. Just as with other diseases that have progressive stages, doesn't it make sense that the course of treatment for those patients with late persistent symptoms should be different and longer than those with an acute early stage of Lyme disease?

Without adequate treatment, chronic illness most certainly will develop. For children, our most impacted group in the State of Pennsylvania, it can mean a loss of educational opportunities, a loss of play leisure for our children. And even a loss of the very basic self-care skills that they need to take care of themselves.

For adults, it is a loss of work, financial devastation, a loss of parenting skills, a loss of role identity.

In my experience, I can tell you that effective treatment can work. The woman in her 40s began walking short distances and kept her job as a productive employee.

My now 21 year old daughter is back to running 12 miles a day, captain of her cross-country team, and beginning her senior year of college doing very, very well.

These cases that I'm referencing here today were diagnosed late. And short-term treatment failed them. They treated beyond the original round of antibiotics recommended by the CDC guidelines at a very high personal cost uncovered by their insurance. They incurred out of pocket expenses.

So in summary, what I want to point out today is that we need healthcare practitioner education on the broad spectrum of treatment options. We need more focus on prevention and treatment with research investments, as Nicole mentioned earlier. That is critical.

And we most certainly need House Bill 629 legislation to ensure that insurance coverage for physician visits, diagnostics and longer treatment when short-term treatment fails. And it does.

Insurance should no longer be a barrier to treatment access for patients and should no longer prevent many patients from restoring their quality of life. But instead let's help them reverse this illness and have a

productive life.

Thank you very much for your time today.

CHAIRMAN: Thank you, Michele. If you want to come back to the table and - somebody can pull up another table. We had the first three presenters.

The members - we have like 15 minutes that we're ahead of time. So we can have a very short time frame here for some questions to the presenters.

And by the way, thank you for your testimony.

Commissioner, if you'd like to come up. And Commissioner, I had just one question for you. I can think of a couple, but I'm going to allow the other members to ask questions, which I'm sure that because we only have a brief period of time.

Have you addressed this with the CPAC organization?

COMMISSIONER OSTERBERG: Yeah.

CHAIRMAN: Is this - is this becoming a priority issue for County Commissioners?

COMMISSIONER OSTERBERG: I'm going to say it's more of a priority with District 7 that I addressed it with, which is the northern tier of counties. But it's been a discussion at CPAC.

CHAIRMAN: Okay. Thank you. And members? Representative Daley? Please be mindful that we have a

brief window here to ask questions.

REPRESENTATIVE DALEY: Thank you very much.

So I'm really interested in one of the things that Nicole mentioned in her testimony. And that is related to the ticks are carriers of bacterial protozoan environmental diseases.

They all have their own specified treatment strategies based on recommendations that are existing right now from the CDC. And that sometimes one treatment does not work for all kinds of treatment.

So where are we in the stage of identifying? So a person's been diagnosed with a Lyme - and I'm almost hesitating whether we should use Lyme, because I think you said that Lyme was only 37 percent of the diagnoses. So maybe if we're thinking tick-borne illnesses would be more precise.

And so my question is, are doctors getting that information? If they're not even always keeping the tick and getting it tested, what ways do they have of diagnosing what the illness is, and then what the appropriate treatment would be?

MS. CHINNICI: So there are tick-borne disease diagnostic panels. So that would cover more than just Lyme disease. The unfortunate part is physicians aren't always aware. They just think Lyme disease.

They don't understand that our ticks in the state are carrying more than one disease and it could be a disease that can't be just treated with antibiotics. So these other diseases like Powassan Virus or Babesiosis, they need their own treatment. So if the ticks in question with one of those and these patients are ill, they're not going to see any recovery with just antibiotics. They need different treatment.

And that's all on CDC's website. It's also in our brochure that we hand out what those guidelines are for the CDC. But unfortunately, the physicians aren't aware of that and they're not testing for those diseases. Some are. Some are very good. Some are not.

REPRESENTATIVE DALEY: So is more work needed to identify or is it just more education of the practitioners and the healthcare providers?

MS. CHINNICI: There's definitely a lot of need for better diagnostics. But the current diagnostics is helpful. It's a tool that's there. But the physician education is very important. Without the physician's understanding and the patients really trusting their physician on getting them diagnosed, it's that education that's lacking.

If a physician knows to at least get a tick-borne disease panel and understands that if it comes back

negative, it's coming back negative maybe because it was tested at the wrong time, or maybe it's something else, or it's just not built up in the system yet for them to suspect it.

REPRESENTATIVE DALEY: And I think this is a quick follow-up. So are there groups that are actually studying the ticks?

I mean, you're identifying. Are there other groups that you're working with that are looking at that? Because I know how prevalent it is in Pennsylvania and it's a serious issue.

MS. CHINNICI: Yeah. There are other labs in the United States that are doing testing. The University of Massachusetts has a very similar program to what we're doing. There's a couple other small laboratories that are actually testing the ticks to see what diseases are in them.

CHAIRMAN: Thank you, Representative.

Representative DeLissio, I believe you had your hand up.

REPRESENTATIVE DELISSIO: Thank you, Chairman. Thank you, Chairman. In reference - this is also for Nicole.

In reference to the healthcare providers and information summation, does the lab that you oversee do

anything with any of the associations like the Medical Society, the nurse practitioners who interface regularly with their members who are, in fact, licensed healthcare providers about this? Or is that also a couple of dots that need to be connected and/or strengthened?

MS. CHINNICI: That is definitely a couple dots that need to be strengthened. We are working on that process now. We've been contacting a lot of clinics and different physicians offices with getting them information on the brochures and trying to set up educational workshops. I know the PA Lyme Resource Network is also working on a lot of educational programs for these physicians.

They also do a CMPD once a year in April to get that information out to physicians, but it's not a requirement for physicians, and that's the issue. It should be a requirement when this is the leading state for these diseases.

CHAIRMAN: Thank you, Nicole.

Representative Hahn?

REPRESENTATIVE HAHN: Thank you, Chairman. If someone had a tick bite as a child 20 years ago, now they're in their early 20s and are showing symptoms, will that - if you have a Lyme disease test, will that show now?

And then how are they going to treat that?

So I have a family member who's going through something similar and I insisted they get tests for Lyme disease, but the doctor said, well, that's really not necessary, but they're doing it anyway. So I'm just wondering, you know, is that something we should be doing?

MS. CHINNICI: Yes, it can be. It's not - the current test for Lyme disease is looking at your antibody response. And unfortunately, the IGM, which determines if it's an active infection is only present for the first couple weeks of infection, and then it converts to IGT.

So over time, you'll always test positive for Lyme disease if you've been exposed to it. They just don't know if it's active based off that. And they're not sure at which point in time if that ever drops off. And that's the antibody response.

REPRESENTATIVE HAHN: I mean, you're looking at a lot of different symptoms that can mimic other diseases. So you know, the one thing was MS.

Right?

So - and no, they don't test positive for MS. So well, then what? Like what? So I'm like find something, right. Like I need to know why this is happening. So you know, doctors don't seem to be very quick on offering a lot of tests, unless you insist on it.

MS. CHINNICI: Yes, exactly.

REPRESENTATIVE HAHN: And then we just need to make sure they start doing that.

MS. CHINNICI: Absolutely.

COMMISSIONER OSTERBERG: I think it's important, though, that we recognize that it should be called tick-borne diseases. I think that's the confusion.

I had just gone through this personally. And when you go to a doctor, immediately they just want you to be tested for Lyme. I didn't want to be just tested for Lyme. I wanted to be tested for all of them and I had to force him to do it.

So I think that word really needs to be taken out of this conversation. Tick-borne diseases- .

MS. CHINNICI: So I need to go back and change to tick-borne diseases?

COMMISSIONER OSTERBERG: I really think it's important that you do that. And that's why you'll see everything we do in Pike County is called tick-borne diseases. We took the word Lyme out of there because it's so easy to get lost with just that one word.

MS. CASSETORI: If I could just chime in on that. I think it's also important to note that, and Nicole referenced this, that sometimes the diagnostic tests for these diseases, particularly with Lyme, can be unreliable.

And I think it's really important that we do

educate physicians on the clinical signs and symptoms and the presentations of Lyme disease. Particularly if they've ruled out other diagnoses that they can mimic, as you mentioned, MS.

So if a person is testing negative for everything else, yet continues to present with clinical symptoms that are in line with a tick-borne disease, I think that's a piece of critical education that needs to be brought forth to our physicians.

Nicole mentioned we do, through PA Lyme, have a medical conference every year. We'll be having that again in April. And we are seeing a growing interest in physicians across the State of Pennsylvania who want this information.

But it is not yet a requirement for them for CEUs. I do think a push for that would be extremely helpful to get them educated and aware, so they can make quicker clinical diagnoses and get a quicker regiment of treatments started for these individuals to prevent this progressive deterioration and development of chronic illness.

CHAIRMAN: Thank you. And thank you, Representative Hahn.

The Chair would just like to recognize that Representative Hershey has joined us. Welcome

Representative.

And our next question is from Representative Keefer.

REPRESENTATIVE KEEFER: Thank you. My question falls in line with what you were just discussing here.

How do we effectively- I don't know if it's an area of legislation, because we're also teetering the line of CDC and what protocol is there. So you know - with what their diagnosis are for the tick-prone disease.

How will you match that up and not stall research in advancing this? If we're going to say, well, if the disease presents this way or if they have these symptoms, you know, mandating XYZ action when you said there's different responses that you have.

How do you approach that, you know, and be effective, and not that you're suffocating and alienating other research and advancements in this area?

MS. CASSETORI: I think that the research piece is critical. I think we need investments in research so that we can better clarify for physicians what should be the proper protocol and develop those. But I also don't think that should be a reason to delay the treatment when a physician makes a decision that ongoing treatment is medically necessary, and it's monitored, and they're seeing patient response to the treatment.

I think it's really important. You know, the CDC, I have it on the infographic, that the CDC did a study and they found that actually 56 percent of patients are treated longer by physicians. So clearly there's indication that physicians are recognizing that patients are responding to treatment.

Part of the issue, though, comes back to the lack of insurance coverage. And I can tell you, I run a support group out of Misericordia University. I have for the past three years, a Lyme disease support group. And the number of attendees is just growing every year.

In some cases, it's parents and children that are coming that are all impacted by progressive Lyme disease. And to have to make the heartbreaking decision as a parent in terms of whose treatment can you afford to pay for, who is most ill in your family at this time, because it's uncovered by insurance.

And I think that's a real issue in terms of from a patient advocacy perspective and keeping the residents of Pennsylvania well and healthy.

REPRESENTATIVE KEEFER: Ms. Chairman, if I may just follow up on that.

So you're getting back to formularies is what- and we always seem to be behind the eight ball on this, though. So by the time, legislatively, that we do

something that impacts the formularies, that's old and we're on to the next thing. So it's like trying to get the timing of that is really I think, how do you do that as a legislature. That's my concern.

CHAIRMAN: Thank you, Representative. And I think the House Committee and the House, we've done our due diligence in the Pennsylvania House. We've passed legislation and we're waiting on the Senate to act. So if you could call a couple of your Senators, that would be very much appreciated.

Representative Schlossberg?

REPRESENTATIVE SCHLOSSBERG: Thank you, Madame Chair.

Commissioner Osterberg, a question for you.

The Task Force is clearly a very robust engaged effort to try to tackle a pressing issue. Any advice for those of us who are from other counties on what we can pass along to our county officials on how they can potentially replicate your successes?

COMMISSIONER OSTERBERG: Well, I think the way to do that is to engage with the professionals in the community as we've done.

You know, I'm a County Commissioner. I'm not a Lyme disease expert or a tick-borne disease expert. But what we did was we heard from the community. I'm sure if

you reach out to your community like we've done with a survey on our county website, where we just asked the question, who in our community is suffering?

And we got back responses. And we not only got responses back, but we got volunteers back. We received information from individuals that said, I want to help address this issue and educate the community and reach out to the schools.

So I think that's one way to start. We certainly can share with you all of the information that we have gathered.

I mentioned a woman's name in here by the name of Mikki Weiss. Mikki Weiss comes to us as a Superintendent of Schools from the City of New York. She's a professional educator. She knew how to put together a program like this, so that we could help initiative it within our community.

REPRESENTATIVE SCHLOSSBERG: Thank you very much.

COMMISSIONER OSTERBERG: You're welcome.

CHAIRMAN: Thank you, Representative. Thank you, Commissioner.

Representative Brown, quickly.

REPRESENTATIVE BROWN: So you know I always have lots of questions, but I'm going to keep it to one. Thank you, Madame Chair.

Nicole, you were with me last week and you mentioned it in your testimony about the State of Maryland vaccinating the mice. And I remember saying well, how do you do that? How do you - garner up all mice and - you can't do that. So we were sort of joking about it.

But a critical aspect of getting way ahead of the problem, which is how it's built. And so can you just give a little bit more insight to that? And I'm going to look at it more, but a little more insight for everybody just on that vaccination piece on the mice.

MS. CHINNICI: Absolutely. So I did mention it a little bit in the testimony. I mentioned small scale because of the geographical location and how cost-effective it could be.

There's a lot of integrated pest management strategies out there for tick-borne diseases, but we're not sure which one's the best. And it might be a bundle of them together. So what the vaccination program is, it's actually setting out bait boxes that have a bait in them and the vaccine for mice.

And the mice will go in and eat the bait and get vaccinated in the process. It's very similar to the raccoon rabies vaccination that they do along the Ohio-Pennsylvania border to avoid the expansion of rabies. It's the exact same thing and it's in the mice.

There's just not a lot of data yet on how effective it is over time and how cost-effective it is because of the cycle of mice every two years. So it would be something you would want to start small scale to really see if that over time is helping an area. Since we have that based on data with the tick-testing program now, we can evaluate that over time.

CHAIRMAN: Thank you so much. And the Executive Director of the House Committee has a question.

MS. METZLER: I'll keep this very quick. The - when you take your child or someone goes to the doctor's after they have a tick bite and they get the blood test done, were you talking they only get a Lyme disease test or is it standard protocol to get the entire thing?

MS. CHINNICI: For the most part, they're just given a Lyme disease test. And most physicians are not aware that the Lyme disease test has to occur, because it's based off of your immune response to that bacteria. So if you're getting - if you have a tick, you go to the doctor. You say you have a tick bite and they say, okay, go get a Lyme disease test.

It takes four to six weeks for that immune response to build up. So it's going to come back negative. You might get lucky and it comes back positive, but for the most part, though, it's going to come back negative.

So then you have the patient that thinks they're okay. Their doctor says they're okay. And then two months later they have these symptoms and they think it's something else at this point and it delays that treatment process.

CHAIRMAN: Thank you, presenters. I think this has been very, very informative. And we certainly, as legislators, have a lot to learn, you know, still. And we look to those of you in the professions to give us this information.

You've done a great job of doing that this morning. And I'm hoping that we can have a continual dialogue with all of you down the road. So my thanks to all of you. And at this time I will ask Harriet Loizeaux, who is with the Tick-Borne Disease Wellness Center, come forward.

And Harriet, you may proceed when you're ready.

MS. LOIZEAUX: Thank you, Chairman.

My name is Harriet Loizeaux. I'm a National Board Certified Family Nurse Practitioner. Before coming to Pennsylvania -.

HOUSE MEMBER: Use the microphone, ma'am. Hit the button.

MS. LOIZEAUX: Sorry. Sorry. Okay. Sorry about that. Hi. My name is Harriet Loizeaux. I'm a Board

Certified - Nationally Board Certified Family Nurse Practitioner. I served in the United States Navy and I later went on to work in the New York State Department of Health, communicable disease supervisor.

We've been working - I should say I've been working with Lyme disease and tick-borne diseases since the '80s. It is for that reason that when Wayne Memorial Hospital and Wayne Memorial Community Health Centers began their collaborative agreement with Pike and Wayne County Task Forces to open a tick clinic originally in Lords Valley, CEO Frederick Jackson asked me to look at the team for the tick clinic.

The first thing I did was to say that the - the name of the clinic was wrong. And I argued with them that it needed to be a tick-borne disease wellness center, not a clinic. You know, it's a different connotation.

So we did open on April 10th, 2019. And I was told to report to Lords Valley one day a week. They don't - I don't think they realized the response that we had. I gave them a couple of examples of when I, you know, had been at a variety of different clinics over the years in New York State and how people would line up around corners when they heard a new clinic or a new wellness center was opening. And that's exactly what happened to us in Pike County.

Rosemary Brown was quick to come up and see us and talk to us about what was going on. The first day, we had over 125 calls. I'm still booked out until November.

After the first four to six weeks of being open, I went back to administration and said that we definitely needed more than one day a week to accomplish our goals. And I was approved to have staffing and to work three days a week in Lords Valley, which was still very busy.

I would like to thank Matt, Michele and Nicole for their great information and their statistical data, who spoke before me.

But I'm going to take a little different twist now, because being in the trenches and being in the front line, it's a little different than being, you know, in epidemiology, which I worked in, in New York State.

We are collecting data. And it one, does show that what we have here - I asked the hospital to run it. So they ran my personal data of the patients that I had seen. And they ran the data of the remaining providers in the Community Health Center.

So in my personal data, I have seen and treated one patient with Bartonella disease. It was a little challenging, because I had to - I'm not only seeing the patients, I'm creating this whole wellness center as we go along as the administrator. So kind of wearing two hats

and then going in and trying to keep up with the statistics three days a week.

So what we showed is we were able to create a liaison with the infusion clinic in the hospital to administer people who needed intramuscular, but I'm working on the IV infusions to be given there. Currently, we are giving intramuscular injections antibiotics when needed for the acute processes in the clinic, in the center.

Let me tell you a little bit about how the patient flow goes there. I have about 45 to 60 minutes for every new patient, which is a good thing.

You usually don't get that in a PCP's office nowadays. But we felt it was very important after all the work that the Task Forces did together that we needed to get a lot of information from each patient. So we have a variety of patients coming in.

Some have ticks on them. Some have a tick that they have removed in the past several days. Some people have been diagnosed for many years from Lyme literate physicians or from some of my colleagues in New York State who've been working with tick-borne diseases for years.

We don't turn anyone away. And for basically everyone who comes in, we do a complete panel that includes an ANA rheumatoid factor, lupus screening, SAID rate, western blot, and molecular DNA PCR, which tests for four

other coinfections automatically. Every patient walking in the door gets that.

As the treatment goes on, if they are found to be positive in any one of those diseased processes, if they have not been back for their revisit, they're called immediately and we send medication to their pharmacy, which is listed in their chart.

Every patient I see back four to six weeks after completion of the treatment for a tested cure. As far as we know, no one's doing testing cures out there.

So how do you know if the patient has improved? So the tested cure, like any other laboratory test, is a tool, but it's also based on the person's physical symptoms. Are they improving? Are they not improving? Have they gotten worse?

And some people, unfortunately, have, by the time they get back to me, have been re-bitten again. So then you're starting all over from square one. We are seeing neurological Lyme, cardiac Lyme, arthritic Lyme, people debilitated, people trying to get disability.

In New York State for the past ten years, you can get New York State disability based on the fact you have Lyme disease. That doesn't exist over here. I'm filling out forms for people who are severely disabled from long-term Lyme/tick-borne diseases and all they have to

depend on is short term or long-term disability that they're paying through for their particular employment place.

I have noticed that most of the insurances that we are dealing with in Lords Valley are covering the bulk of the lab testing and on behalf of healthcare visits. We have expanded our lab testing also to offer patients MDL labs out of Hamilton New Jersey. They're a great lab.

The reps came and met with me two weeks ago. And they've made us a tailor vector-borne panel sheet just for our clinic, because we have just so many different requests coming out. If I have a patient in front of me who's still making complaints, who has symptomology, especially the neurological, cardiac, or arthritic diseases, I keep doing testing.

And nine times out of ten, we do find the organism. Rocky Mountain spotted fever carrying is a leader in one of our coinfections.

And I think of the stats - it's just grouped as Rocky Mountain spotted fever, Rickettsia, and unspecified. So bear with me. These - these stats are not 100 percent reflective of what I've been seeing, because I depended on someone scanning in the information so that can be retrieved.

So I say what is on our stats for myself and for

the rest of the providers at CHC, we're missing about a third of that information to date.

Babesiosis we're seeing and treating quite a few people. Some people have - would have to be pretty creative with their treatments because of either their comorbidities or they're allergic to what the treatment may be.

So we're kind of - we're kind of like the MASH unit in tick-borne diseases. I work collaborative in - collaboratively with Dr. James Kruse, who's our Medical Director, who's been very supportive of the process we're doing in Lords Valley. And has encouraged us to keep moving forward and do as much as we can for the care of the patients.

Frederick Jackson basically has said, well, you just keep doing what the patients need because that's what we're here for. So I think we have a very good supportive administration backbone going on.

In terms of provider education, I just finished completing - I created an educational module, which I'll actually be starting to take out to the different sites in the Wayne Memorial Community Health Center Clinics. I will be in Hamlin at 7:30 on Wednesday morning to spend an hour with that staff and go over how to do an intake, how to get the testing done, and how to do your follow-up care.

And every different office will be getting the same education. So we're trying, as a small northeast hospital, Community Health Center, to do the best we can to make sure everyone in our area has the availability and the access to the care.

Under the Community Health Providers, you can see where unspecified Lyme disease, they did diagnose 141 cases. And I think that's pretty significant just from knowing about that our clinic has -.

That has nothing to do with the Wellness Center. That just has to do with the different clinics that are associated with Wayne Memorial Hospital. So they are starting to test more. When they first opened up the Wellness Center, I sent out a memo to all the providers. You can call me. You can text me. I gave them my cellphone number.

And I have an ongoing stream of questions coming in from the providers. So to me, that's a great sign because without provider education, we're never going to have a healthy population. Thank you for your time.

CHAIRMAN: Thank you, Harriet. Very informative. I was impressed with the 125 folks that came in the first day. And you'll be staying for questions after.

And the Chair would like to recognize Representative Ullman, who is over here who is joining us

today. Thank you, Representative.

And at this time, Dr. Jeffrey Jahre. Doctor, I hope I'm -.

DR. JAHRE: Jahre, but it's quite all right.

CHAIRMAN: I apologize.

DR. JAHRE: No.

CHAIRMAN: And you're with St. Luke's University Network?

DR. JAHRE: I am, indeed.

CHAIRMAN: All right. Please proceed when you're ready.

DR. JAHRE: Thank you. Good morning. First of all, I, too, would like to thank -.

HOUSE MEMBER: Mic up, please.

DR. JAHRE: Is my mic - is it on?

CHAIRMAN: You might have to get a little closer.

HOUSE MEMBER: Push the button.

DR. JAHRE: The button.

HOUSE MEMBER: It should be a green light. Green light.

DR. JAHRE: How's that?

First of all, I'd like to thank Rosemary Brown, Representative Rosemary Brown for inviting me to address this distinguished audience on a topic that I think, as you've already heard, is important to us all.

I'm Dr. Jeffrey Jahre. And I'm currently the Senior Vice President for Medical and Academic Affairs for the St. Luke's University Health Network. It is a health network that has ten hospitals, nine of which are in Pennsylvania. Many of the hospitals are in your representative areas, including St. Luke's Monroe Hospital right here.

I'm also professor of medicine at the Lewis Katz School of Medicine at Temple University. But the reason why I am here today is because I am a Board Certified Infectious Disease Specialist and I've practiced in this state for the last 42 years. And I've seen the development of Lyme disease become the number one vector-borne diseases in this country.

And obviously as you heard, Pennsylvania does lead the way in terms of numbers of cases. And what is most important is that there's also an emergence of other important tick-borne diseases. And that is a continually-evolving story.

In this regard, my colleagues and I published the first reports in 2013 of the tick-borne disease Babesiosis, that you heard a little bit about, that arose in Pennsylvanians who had not traveled. Previously, that disease, you might be familiar, was primarily in Nantucket and Martha's Vineyard and affected the residents there.

But obviously with the tourists, it has gradually worked its way westward.

And now, as you've seen from the reports of the tick studies, it is not uncommonly identified in our ticks. And we are certainly, as you've heard, seeing it more as an actual disease.

In addition, next month we have a report that will be published in the American Journal of Medicine about another tick-borne disease of increasing importance, known as Anaplasmosis, that I'm sure you'll be hearing more about. And that oftentimes not only can exist alone, but coexist in many cases with Lyme disease and has to be tested for.

Nevertheless, Lyme disease represents the biggest threat. And any comments that I have that pertain to Lyme disease for the most part will also apply to the other diseases that we'd be talking about that are tick-borne.

Lyme disease is present in all 67 counties of Pennsylvania. And I'm certain, if I poll any of you or anybody in the audience, you would have either direct experience with Lyme disease or know someone who does. When you actually hear about numbers, keep in mind that numbers represent the proverbial tip of the iceberg. Most cases of Lyme disease are probably either undiagnosed or not reported. So they act as a guideline, but keep in mind

that there are probably many more than what you actually can see.

While Lyme disease and other tick-borne disease rarely result in mortality - and that makes it different obviously than things like cardiac disease or heart disease or more flagrant recent opioid epidemic. I think you can all appreciate that it is a major issue that affects our residents and visitors. And it affects them in many ways, both in short and long-term disability, medical expenditures, and in many cases can affect their actual livelihood.

I believe that if the right steps are taken, and we can do reasonable control measures, that we might be able to achieve more success with this than with most of our eight other major healthcare challenges. You are probably familiar that the Pennsylvania legislature authorized a Lyme disease task force that published recommendations to the Department of Health in 2015. It was an excellent task force. They did excellent work.

And although progress has been made, these recommendations can be added to many others that will address the disease's current evolution. And I'd like to go through some of those recommendations that you can consider in this regard.

First of all, prevention. I think we can all

agree that prevention is always better that cure. You've heard about the many laudatory educational efforts that have been undertaken by the previous speakers. And they are indeed laudatory.

However, they would all agree, and I certainly would agree that much, much more has to be done in order to get it out to our public and also practitioners. And we have to increase the knowledge of personal protective measures that deal with proper outdoor clothing, tick avoidance, repellants, removal and environmental risk factor reduction. Some of these factors, some of these examples would be, for instance, proper inspection.

Finding the tick is not always easy. It oftentimes hides in areas that we might not look at, like our groin or, you know, our armpits. And what's quite important is that in most cases if you can remove that tick properly within 24 hours, you're not going to come down with a disease. So we've got to get that out there, because there's still a lot of misinformation regarding that.

In addition, there has to be additional studies on natural based tick repellants that appear to be effective to supplement the four currently approved repellants. Those repellants, I think most of you are familiar with DEET. There are different concentrations.

The concentration that probably should be used is somewhere between 20 and 35 percent. There are people who use a hundred percent. There are people who use ten percent. And neither of those is really the sweet spot, or they may not even be successful.

In addition to DEET, there's oil of eucalyptus, picaridin, and IR3525 or 3535. And again, there are many others out there that need investigation that could be used and available to our public.

There should be further support for an effective, safe vaccine. There was a vaccine briefly. And then it was pulled off the market, because they were having problems.

For those of you who have a veterinary background, you know that there is a vaccine for animals.

We do not have a vaccine right now for humans. This has to change. And we need further research into developing a safe, effective vaccine. There should also be more research into tick eradication programs and some of the environmental controls in that regard. You've heard a little bit about that. But trust me, much, much more could be done.

The diagnosis. Again, I listened carefully to a lot of the questions that you had regarding the diagnosis.

I think it's fair to say that the diagnostic

tests that we have right now are useful, but they don't represent an absolute end all of the different stages. And we need better diagnostic testing, not only for Lyme disease, but for the other tick-borne diseases that have been mentioned. There's a critical gap of a goal standard test for Lyme and other tick-borne diseases that can accurately diagnose active disease.

And I want to point out active is important, because as you've already heard, in many cases, these tests can be positive lifelong. They do not necessarily demonstrate activity. If they're done very early on when you have a rash, you'll get a false negative. If you do it on a normal population, you will get false positives. So we need better testing.

There should be enhanced efforts to improve the public's education to identify the cause of the deer tick. Again, you've seen some of the literature that's available. And also the classical Lyme disease lesions.

It's amazing how many times I see confusion regarding - if any of you have ever had a tick bite, you know that oftentimes there's an area of irritation around that tick bite, a reddened area. That is often, and should be, less than the size of a quarter. That is not, and I repeat is not the lesion of Lyme disease, but it's often misidentified as so.

The lesion of Lyme disease is greater than a half a dollar and it expands. And you can see that. If you went back historically in Lyme disease patients, anywhere between 70 and 90 percent of the time, and it's called Erythema migrans.

You need to be able to tell the difference. I'm amazed at how many times not only does the public, but physicians do not know that.

The educational efforts should also include the importance of coinfections. And again, I think we've heard of that. That it is not unusual to have more than one disease at one time.

I support the mandatory education for physicians and other advanced practitioners to obtain licensure in this state. You know that you are in demand, that we have continuing education in child abuse and now the opioid epidemic.

I believe that this merits equal importance or at least importance enough to do on a periodic basis. Not necessarily every two years, but periodically because there are advances and other things that need to be put out to our practitioner population.

Treatment. There are many common drugs, or I should say there are common drugs that are primarily generic that appear to be effective for the treatment of

Lyme and other tick-borne diseases. Thus far, resistance that you've heard about with other bacterial diseases hasn't really been an issue for Lyme disease.

Enhanced educational efforts should also be used to increase not only the knowledge of tick identification, but also the likelihood of disease based on exposure time that can lead to simple prophylaxis and timely treatment.

I certainly agree with all of the previous speakers that if you're going to treat, early is better. And you can prophylax to actually prevent disease.

And so if you know that you had an engorged tick or a tick that's been on for more than 36 hours and have not developed the signs of Lyme disease, a simple dose of Doxycycline, one dose, can be effective in preventing the later development of this disease.

There should be current, effective evidence-based standardized treatment protocols for Lyme disease in its various stages. We do have some guidance from the CDC. And although I think as one of the previous speakers indicated, there may be some controversies surrounding that, I'd be happy to answer questions regarding this. I'm a firm believer in what's known as evidence-based medicine.

We have to have a standard that starts someplace. We have to give some latitude for individual - individuality, in terms of our practitioners, but it can't

be all over the place. And we also have to acknowledge that evidence-based treatment does change over time. What was standard a few years ago is obviously different now. And what's now may be different in a few years.

There is a huge issue with drug shortages and pricing variability. And that particularly affects generic drugs. I've seen the price of Doxycycline vary within a few days by 1,500 percent.

Although there has been some recent legislation that addresses these issues, much remains to be done. Governmental intervention is required to increase pricing competition and to decrease some of the pharmaceutical shenanigans that have taken place that I think may be familiar to you.

Some of those shenanigans are buying up generic drug companies or actually bribing them not to come out with a specific drug. The filing of unnecessary lawsuits that helps to prevent them from coming out. Extension of patents for ridiculous reasons, the differences in packaging or adding an indication. This is not sensible and needs to change.

We also in some cases, when we do have real shortage, not the imagined shortages, need to be able to import drugs from reputable sources overseas. This needs to be done.

And I also believe, that when appropriate, there should be certain pricing caps to prevent total free for all in the market. But obviously these caps have to take into account cost and development of drugs.

So there's also controversy in the role of antibiotic treatment for persistent Lyme disease or sometimes what's known as chronic Lyme disease. Again, I certainly acknowledge that there is controversy. And as previously mentioned, if we can have a good goal standard test, that would help us to determine who and how long patients need to be treated.

So with that, I'm going to stop. Thank you very much for your attention. I'd be happy to answer questions later.

CHAIRMAN: Thank you, Doctor. And our last presenter today is Donald Eggen - I hope I'm pronouncing your name right - who is the Chief for the Forest Health Division of the Department of Conservation and Natural Resources. And sir, you may begin.

DR. EGGEN: Thank you for having me here today. I'm not a deer tick expert. I'm not a disease-borne expert. But I am an expert on integrated pest management. I've been doing it for 40 years. I also deal with the staff that deals with exposure to ticks all the time. It's the number one Workers' Comp issue in the Bureau of

Forestry. And we continue to get staff that still has - they get deer ticks and get Lyme disease. And we actually know what we're looking for and do the treatments and the preventative stuff. So that's an issue.

On a more personal note, my wife was originally from Hamden, Connecticut. And my mother-in-law years and years ago used to go paint meadows in Lyme, Connecticut. And for years, she had degrading health, et cetera. And this being - looking at the list of all of her symptoms, we are for sure that she had Lyme disease. So it's an important issue.

My written testimony deals with a couple different areas. One is I'm going to look at this from the standpoint -. I'm glad to hear some of the previous speakers talk about vaccinating the mice and the deer and tick eradication. So I'm going to talk about why do we have an abundance of ticks?

From a pest management standpoint, to me, that's my target. And also the pathogens. I'm glad to hear about the research on pathogens, vaccinating the deer and the mice, but also getting at the deer tick population.

Why do we have so many deer ticks and tick expansion of others in Pennsylvania? Well, it's due to a variety of reasons. Deer populations, weather, small mammal populations, coyote range expansions into fox

territory. I'll get to that point. Urbanization and fragmentation of forest, and invasive plants, especially something like Japanese barberry.

As you know, the life cycle of the deer tick moves from small mammals to large mammals. So that's your target. That's the reservoir of the pathogens.

Foxes prey on very small mammals, while coyotes have a different food. Their range - when they expand their range, they kick out foxes. And so you'd have actually increases in small mammal populations. So there's one issue.

The other is something like Japanese Barberry. When that gets established in an area and it becomes a huge thicket, it has thorns on it and stuff like that, small mammals like to hide there. Deer tick populations increase whenever you have Japanese Barberry infestations.

And then the whole issue of too many deer and invasive plants on a landscape basis is - and it's a complicated thing. It's not just point A to point B.

Dr. Bernard Blossey at Cornell University has a very good study looking at deer, invasive plants, native plants. Deer like to feed on the native plants. They don't feed on the invasive plants.

But there's always a seed reservoir there. So when you have high deer populations, they reduce the native

plants. Invasive plants take over. And when you get in an area like that, and after a while the seed bank can't reproduce that natural vegetation, the deer actually move on.

So you actually might have less deer in that location, but that means they're more abundant some place else. So deer populations are a big factor in having high deer tick populations.

Pesticide spraying. I'm glad to hear some talk about tick eradication. It'd be kind of hard to do that state-wide, because if someone said it's in all 67 counties, and kind of hard to spray everywhere where you have deer populations.

But spraying can be done on the ground. You heard that the highest incidents of people in their back yards. You walk out in your back yard, you get a deer tick. There are treatments that you can do to your property.

Also putting out traps. I like the idea about the trap to pick up the vaccine. But you can also put small tubes with Permethrin on the cotton balls. The mice go in there, take the - take the cotton ball for the nesting material, and now all of a sudden those ticks are exposed to Permethrin.

But treatment, that's a short-term solution.

You're not going to get rid of the problem. You're still going to be surrounded by deer, other small mammals in that kind of situation. Especially in the urban environment.

There's less deer hunting in urban environments. I live just outside West Chester and we have 40 acres of open space in our development. And I have one of our foresters and three of his buddies come and they do archery deer hunting in our area to help reduce deer populations.

So there is an avenue there. Deer hunting in urban areas is not illegal. You just have to have permission. And archery can be used to help control -. If you live in an urban environment, you've got some open space and there's - it's not unusual to see 16, 17, 18, 20 deer walk around. Deer populations are very high in urban situations.

So while practical spraying for deer ticks statewide might be impractical, getting information - all the information I heard about getting outreach to the public, there are ways that you can treat your yards for short-term solutions for ticks in your yards.

Areas with lower sustainable deer populations have been shown to have fewer deer ticks. But urban areas are especially vulnerable, as I mentioned, because deer hunting tends to be less in those areas.

One thing that's popped up that we get questions

about, the Bureau of Forestry and Game Commission, we have prescribed fire for forest regeneration. Yes, prescribed fire will reduce the deer tick population in that area short-term. I mean, the entire rest of the area is surrounded by more deer and more small mammals along with the ticks.

And they'll still come into an area. All information that you've heard today, all the prevention stuff are key factors. I think all the comments about research, every time I give a talk on invasive species and stuff, I always say my talk would be really, really short, and it would probably be over if it wasn't for research.

Everything that I use in my profession in forest health comes from research. So the more than you can do to support research into, either through universities, grants, or what have you, the tick lab here, trust me, my staff has utilized this. It seems every time I go out into the field, I do my tick check and everything.

And I find them and I get them off me. And at the end of the day, I take care of my clothes and I get back in the car later, I almost always gets my deer ticks because they're on the car seat. And I get them the next day. And as I find them on my hairline or something like that, and I said, you little bugger. It's there.

And it always gets me when I get back into the

car. But we're looking for those. We know what we're doing, but we still get deer ticks.

So that prevention is key. The tick lab here is important. I'm glad to see the support for that and I hope that continues. And I'll try to keep it short, so that you can catch up on your time.

I'm available for questions.

CHAIRMAN: Thank you. Yes, thank you. And the last two presenters, if you would like to come to the table, please come on up.

And members, if you have a question for the other previous presenters, just, it'll all be pending, of course, on our time.

I would just like to thank, you know, everyone. And I'm pretty much going to defer to the members. I can speak at the end, if I have any questions. So if members, anyone have a question that -?

Representative Hahn?

REPRESENTATIVE HAHN: Thank you for your testimony. Sorry. I thought I had that on.

Doctor, I just want to ask a question. You had mentioned about the size of it being more than a half dollar. But if it's in places where you can't - say between your toes. Maybe I haven't noticed it. So is it really going to get the size of a half dollar?

I mean, I think I've had people you said, that have come in the office and said that they had, were diagnosed with Lyme disease. Never saw the rash or the bullseye that we talk about.

So I think you said it's most always or said it's always there. But it's not always there.

Correct?

DR. JAHRE: You're absolutely correct. The statistics actually vary. The general statistic, at the low end of the scale, it's about two-thirds of individuals with bonafide Lyme disease who had a history of a rash.

But I've actually seen some other estimates that go as high as 90 percent we were actually talking about absolute bonafide Lyme disease.

But the bottom line is it isn't always there. It may be in areas that are less visible. It might be on your back and you don't see it. And the rash can be somewhat protean in the way that it displays itself, you know.

We'd like to think about that everything is always this classical target that expands. It isn't always that way. Sometimes it looks like bands. And that's why, you know, education is very important. But usually it does expand and it is visible when present.

REPRESENTATIVE HAHN: But not always?

DR. JAHRE: Not always.

REPRESENTATIVE HAHN: What is St. Luke's doing so - as far as educating the doctors there?

So do you have a class for all the doctors at St. Luke's to educate them on this, and maybe the health network mandates rather than we as a state mandate?

DR. JAHRE: Well, the answer to that is yes. In fact, we do this - are involved in both undergraduate and graduate medical education. We have a branch at Temple Medical School on our campus. And just last week a lecture to those individuals was exactly on that topic, on Lyme disease and other tick-borne diseases.

We also have periodic educational efforts to help our practitioners. Getting everyone together in one place is not an easy thing anymore, you know. At one time the hospital was the centerpiece for all practitioners and physicians.

Today, many of our advanced practitioners and physicians never even set foot in the hospital, because they're basically outpatient. So we have to have different ways of getting to the population. And we do that. But I certainly would not want to tell you that it's perfect. And a lot more to be done in a lot of different ways.

REPRESENTATIVE HAHN: We could probably use telemedicine for that, too. Thank you.

CHAIRMAN: Thank you, Representative. Thank you,

Doctor.

Representative Zimmerman?

REPRESENTATIVE ZIMMERMAN: Thank you, Madame Chairman. And thanks for the testimonies this morning. Question for the doctor.

So how many, how many various tests are out there? One of the things we hear is, you know, from the insurance side, is that there's so many tests and none of them are really that accurate. So if there one of them that kind of stands out that's maybe a little better than others?

And to follow up on that then is kind of a second question and that's on vaccines. I know on the animal side, we have it.

Is there any conversation on the human side for a vaccine?

DR. JAHRE: Both are excellent questions. Again, as far as the testing, the classical testing that revolved around what we call the two tier or two-stage testing of which a type of test that was fairly simple to do, called an ELISA test was done. And then it would be confirmed by a Western blot.

There are now some changes that are likely to be made with only two types of ELISA tests, because they can be done much more simply in a laboratory or hospital

setting than having those sent out.

As I had indicated, if you do those tests during the earliest stages, for instance a rash, it would likely be negative. That's an issue.

The other issue is that the test, once positive, will oftentimes persist for a lifetime. There isn't a good way right now of re-dating activity. Although some of the newer testing with the two-touch might be helpful in that regard.

And unfortunately, if you test a low-risk population, tested everybody in this room with those two tests, unfortunately a number of you people would become positive.

There's also what's known as PCR testing that is only approved in certain fluids. So what you have is - and there are laboratories that are skilled in doing these tests. And then there are laboratories that are not. I can tell you there are certain laboratories that I can send a test to and I know I'm going to get a positive whether I should or shouldn't. And some people take advantage of that.

So what we need is a better unequivocal gold standard test. I don't think there's any doubt of that. That's not to say that the test is useless.

The second part about the vaccine, there are

people certainly that are working on it. It has been a major topic of conversation. There are a number of individuals who felt that the withdrawal of the initial vaccine might have been premature.

There were a number of issues related to that, that, you know, I don't think we need to go into over here, but a lot of them involve medical legal issues.

Further support, as with any vaccine, this has to come really from I think a governmental legislation, some protection for the company. Because it's - you know, vaccination, when you start giving it to a lot of people, it's a high risk area.

And there's not a lot of profit in it. And that's why there are not many companies right now that makes vaccines altogether. I think currently the last time I looked there were only three or four of these. So this is where people like you can help.

REPRESENTATIVE ZIMMERMAN: Good. Thank you. Thanks, Madame Chair.

CHAIRMAN: Thank you, Representative. Thank you, Doctor.

Representative Daley?

REPRESENTATIVE DALEY: Thank you, Chairman. So I want to just say thank you to all of you for your testimony. It was really interesting. But my question

that I think goes to Dr. Eggen related to the test management.

And I live in Montgomery County right outside of Philadelphia. And a lot of the yards that I passed in my travels have signs out that the property is being sprayed for mosquitos and for ticks. Now, I've had my yard sprayed for mosquitos. It's a garlic spray, so it smells bad for - or it smells like garlic for a little bit, but then it goes away.

But it really actually decreases the number of mosquitos that I have, unless there's really heavy rain. So I'm curious about the tick spray, because we look at the other information we got, that playing in the yard and yard work are the most common activities for exposure. And that children ages two to ten are the - you know, at the greatest risk.

So it seems like recommendations for getting the yard sprayed, because you've said that. But are they safe? Like what's - like the garlic spray, I feel we can kind of live with that. That's a good kind of thing.

DR. EGGEN: Correct. Some - that - just to do over the whole yard, something that's, you know, mechanical or some other kind would be fine.

Typically what I see is that okay, you've got a yard and you've got an edge to that yard. That's where you

use the chemical, -

REPRESENTATIVE DALEY: Right.

DR. EGGEN: - along the edge, because if you keep the grass mowed and you don't have tall vegetation.

REPRESENTATIVE DALEY: Yeah.

DR. EGGEN: It's the tall vegetation that's the issue. So it doesn't mean that you can't get ticks. So it can be a combination of that, where you use the hard insecticide along your perimeter. And that's where you put the traps as well.

You want to get the traps out in the high vegetation. Like for example, in my yard I got a tree line there that's just off my property, but that's got high vegetation.

Now, my yard's mowed. My dog rarely gets ticks, rarely. And it's got a fence there, so he doesn't get into the high vegetation. So yeah. So yeah, you don't want your kind crawling around picking up Permethrin on -. But there are other things like that that can be used, yes.

REPRESENTATIVE DALEY: Okay. So the other thing is, I think we all learned that it was really essential that we put sunscreen on. You're supposed to wear sunscreen all the time. You always see parents putting sunscreen on their kids.

Are there safe things to put on kids?

DR. EGGEN: Some of the botanicals can be used, if you don't want to use DEET. Also treating the clothing is probably more important.

REPRESENTATIVE DALEY: Uh-huh (yes).

DR. EGGEN: You treat - that's what we do. We'll go in the field. I'll take my field pants, put them out in the yard and I spray it with the good stuff. It dries and actually can go through about three, four or five washings. That's what we use.

So you're not putting it on you. And actually, there is the non-chemical stuff that I actually use then on my exposed skin surfaces.

Now, some people, staff, you know, no, just give me the DEET. I want the good stuff, et cetera. So that's what we do.

So you can treat clothing that way. Let it dry and you can do it that way. But yeah, the yard work, the greatest - the reason why that's a high number is because that's a high frequency of use. And you have a lot of deer in the urban environment. So lower deer lowers that tick population.

So that's a big issue in urban areas is high deer populations.

REPRESENTATIVE DALEY: You are so right about that, because it is, it's a huge issue. I think I had

deer in my yard because my house is almost like a chute down through the woods.

DR. EGGEN: Our deer hunters for our development's open space over the last year have taken out about 62 deer. And trust me, we still have a heck of a lot of deer.

REPRESENTATIVE DALEY: Well, thank you very much.

CHAIRMAN: Thank you, Representative Daley.

Representative DeLissio?

REPRESENTATIVE DELISSIO: Thank you, Chairman.

Harriet, is your wellness center unique in the Commonwealth or are there other similar wellness centers that are focused on tick-borne illnesses, diseases?

MS. LOIZEAUX: I don't think they're - I don't think there are any other in the Commonwealth, that I'm aware of.

REPRESENTATIVE DELISSIO: And what was the genesis of establishing that center that so recently opened?

MS. LOIZEAUX: It was a collaborative approach between Wayne Memorial Hospital, Pike County Task Force, which- .

REPRESENTATIVE DELISSIO: So that task force and the Commissioners spoke?

MS. LOIZEAUX: - that Matt spoke about, and the

Wayne County Task Force. Yes, ma'am.

REPRESENTATIVE DELISSIO: And then a quick question. You mentioned a test of cure. What was - is that another type of diagnostic test that determines what stage somebody's at? I was just curious of -.

MS. LOIZEAUX: No. That's just a repeat of the prior test that was done. In other words, the Western Blot is divided into two sections, so to speak, the IGGs and the IGMs.

So if the patient has two IGMs, they're considered to be positive. So then we do treatment and then they come back later and they do what we call the test of cure, to see if those IGMs have been eradicated. Sometimes they're completely eradicated or sometimes they still might have one IGM and no symptoms, or one IGM and still significant symptoms.

So that's how we determine which direction we're going to go in treatment or nontreatment of the patient.

REPRESENTATIVE DELISSIO: And then Dr. Jahre, very quickly.

Of that, you mentioned the 2015 task force and its recommendations. Of those recommendations, how many - are there still recommendations to be implemented that are not -?

DR. JAHRE: I think the main recommendations,

which again involve prevention, diagnosis and treatment, there's been a major start. But as you already heard, there's so much more than can be done.

So I think I would characterize it as an incomplete effort right now. But the recommendations as a whole were valid then and they remain valid now.

I might just also want to quickly add a couple things about Permethrin. When you do apply that to clothing, it's very important to put it on the top of your shoes and socks, because oftentimes that's where deer come on.

And it does last for about a half a dozen washings once it's on your clothing. And it's inexpensive.

I would also want to add to Harriet's test of cure. What I think she was trying to say is that you can certainly use those tests as a helpful thing. But there isn't any substitute for your - right now, you have to use your clinical judgement, because there isn't an absolute test that tells you, no, you need to stop therapy right now. And that is part of the problem.

REPRESENTATIVE DELISSIO: Thank you, Madame Chairman.

CHAIRMAN: Thank you, Representative and thank you, Doctor.

Representative Jerry Knowles.

REPRESENTATIVE KNOWLES: Thank you, Madame Chair. Thank you all who come to testify. Doctor, I have a couple of questions and I think they should be pretty simple to answer.

DR. JAHRE: I'll try to do it quickly.

REPRESENTATIVE KNOWLES: There are always the scary ones.

Right?

DR. JAHRE: Right.

REPRESENTATIVE KNOWLES: You have described yourself as a tick-borne disease expert or specialist.

How many are there throughout the Commonwealth?

DR. JAHRE: I'm an infectious disease specialist. And because this is such an important infectious disease that virtually anyone involved in infectious disease has to have major knowledge of this. There are people who totally, I think, devote their entire career to this one disease.

The person who discovered Lyme disease, a fellow named Allen Steere at Yale, and he's done so. But for most of us, we do a variety of different things. And there are several hundred of us throughout the Commonwealth.

REPRESENTATIVE KNOWLES: Okay. I am familiar with the D.O. And on his website, he identifies himself as a tick-borne disease expert.

Does he have to have anything beyond being an M.D. or a D.O. to identify himself as such?

DR. JAHRE: No. And so again, it's like information that you get off the internet. There's valid information and there's invalid information.

And I think the public has to be aware of where they're going. That's not to say that there are people who have truly become highly educated and who are aware of what the current situation is, and they are reliable. And they may not be the infectious disease specialists. I would certainly agree with that.

But there are also many, many other people out there who call themselves, quote, Lyme disease experts. And I think you would have to look at that kind of and be aware.

REPRESENTATIVE KNOWLES: Okay. So if I go to an infectious disease specialist or a credible tick-borne disease expert, is there a strong likelihood that the treatment that I get will be the same?

DR. JAHRE: I would hope so. I mean, again, that's where we get to what is known as evidence-based medicine. There are absolute recommendations that have come out through very reputable bodies, such as the CDC and also the Society of the Infectious Disease Society of America.

Those recommendations are currently actually being revised right now. So it goes to show you what a dynamic situation that we're in. Any good physician who calls themselves an expert should be aware of those recommendations.

REPRESENTATIVE KNOWLES: Okay. Just for the -. The reason I say that is one of our colleagues had a family member that had Lyme disease and they really spoke very highly -. And it just seems like - it seems like there are people in the medical field who agree with you that we need to very carefully judge them, who the experts are.

So thank you very much, Madame Chair. Thank you, Doctor.

CHAIRMAN: Thank you, Representative Knowles.

Representative Hershey?

REPRESENTATIVE HERSHEY: Thank you, Madame Chairman. Mike, excuse me, Representative Knowles, I have to lean over again.

So for Dr. Eggen, you talked a lot about the Permethrin tubes and the spray. But you said that those are short-term solutions for land owners because the land is surrounded by ticks.

Do land owners have long-term solutions for population control or what does that look like?

DR. EGGEN: Shoot more deer.

REPRESENTATIVE HERSHEY: Okay.

DR. EGGEN: That's kind of a funny, quick response, but when you look at population dynamics or reason why we have high deer when Pennsylvania is - we've got the climate. We've got the conditions.

We have deer populations that are - in a number of areas that are too high. And then the whole, like I said, invasive plants. So we have high tick populations.

To get at that problem with high tick populations, you have to deal with the source. You have to deal with the small mammals and you have to deal with the deer.

So no, you don't have a long - a homeowner does not have a long-term solution until you start doing what we're trying to do in our neighborhood is have archers come in and shoot more deer.

REPRESENTATIVE HERSHEY: So are there other plants other than barberry that are a problem and where is that plant a problem?

DR. EGGEN: That's the principal one with regards to small mammals, because they do utilize that. They've got thorns on it, so predators of the small mammals can't get in there.

So a number of states, especially like in State Parks and things like that, will go in and control Japanese

Barberry. And as soon as you do that, small mammal populations go down. So controlling the Japanese Barberry is a valid way to reduce small mammal populations and then therefore reduce tick populations.

REPRESENTATIVE HERSHEY: Thank you.

DR. EGGEN: And just one more comment I had on preventative care that we've noticed on our staff, where people pick up fewer deer ticks is - and this is for folks that do work outdoors.

We actually had tick gaiters. You wrap it. It's like velcro. You wrap it around your pant leg and it's impregnated with the insecticide and it's got like little barbs on it. And since everybody has started using that, we've picked up fewer deer ticks.

Because as the doctor pointed out, they crawl up your - you don't tuck your pants - your socks into your boots, your socks over your pant leg, and then you put the gaiters around that. The deer ticks can't get on you unless it's really tall vegetation and they're up - and they're up high.

So that's another preventative thing for people who work in the woods.

CHAIRMAN: Thank you, Representative. Thank you, Mr. Eggen.

And Representative Rosemary Brown?

REPRESENTATIVE BROWN: Thank you, Madame Chair. Thank you all for your testimony.

And Dawn, I really appreciate - you've done something that I've really been trying to think about is how do you help all those aspects to control the population.

So I think one of the first things that I'm going to do, even for the residents, is put out something that talks about in their back yard, based on also connecting it to the stats that the AHU lab has provided, and why that plays such a critical role in prevention just around your house.

So I thank you for that. So I'll be following up with you.

Quick question. There's two quick questions.

First, Doctor, thank you. You have always been very accessible and you have been working very strongly with me. And as an infectious disease doctor, as Representative Knowles sort of alluded to, you get the patient that's been missed. You get the patient that we can't figure out what's going on with and everybody says okay, you figure it out.

Right? Pretty much?

DR. JAHRE: Pretty much.

REPRESENTATIVE BROWN: So - and I thank you for

your realistic comments supporting the continuing medical education for physicians. It is a piece of legislation that I have that I've been working very hard on with some very strong resistance, for the reasons you mentioned.

But I think your realistic notations of why it's needed is important. So one of the aspects that I put in the legislation was a five-year sunset, which basically in the legislative world means in five years, if it was to go into law, the legislature would have to revisit it to see if it was still of critical importance.

And because there are different things that could come up. So you want to make sure that what you do makes sense. We thought that might be something that would help the medical community be attracted to it.

But where do you feel, if there's a physician population, do you believe it's all physicians that need to get this continued medical education or do you believe there's a certain internal medicine?

Where do you believe that it should start if it can't be all, if we're getting some of that resistance? And I understand this is your personal opinion. I don't mean to put you on the spot, but I thank you for your honesty.

DR. JAHRE: It's okay. I'm used to being on the spot. Actually, I do believe that it should be all

physicians and all advanced practitioners or other healthcare providers.

Why do I say that? Because oftentimes when someone has a tick bite or an exposure, they're going to go to the nearest source. That could be a podiatrist. It could be a urologist. It could be a pathologist.

And this is so ubiquitous right now that I believe that we all need to know about it. If we're saying the general public should know about it, why shouldn't healthcare providers be a special part of that?

So I certainly commend your efforts to do that. I mean, clearly it's not possible and I do recognize the realities of the situation. Then you're dealing with what you would call frontline providers, which are the primarily primary care practitioners to a large degree.

REPRESENTATIVE BROWN: Thank you very much. I appreciate that.

And Madame Chair, one quick question to Harriet.

Harriet, the Center, when you get a patient and you're giving them the intramuscular antibiotics, are you getting any problems or concerns on the antibiotic usage through the Center for that treatment at all from the federal level, the CDC, anything like that with your antibiotic usage? Just is there anything there that is an issue?

MS. LOIZEAUX: No, there's not, because we're following accepted guidelines that Dr. Cruse has approved. So it's very rare that we're doing that. But occasionally with the neurological Lyme, he's recommended Rocephin, one gram. And they do that anywhere from three to six weeks.

REPRESENTATIVE BROWN: Great. And then the test of cure, does that have any reimbursement issues at all, the second test?

MS. LOIZEAUX: We haven't seen that so far. We haven't seen that so far. And we have patients who are Medicare. Patients, some of their insurance goes to LabCorp. Some goes to Quest. So there's a pretty good variety up in our area.

And of course, we have some patients who are coming from New York and New Jersey, just because of, you know, the proximity of where we're located. So we haven't had any issues yet.

REPRESENTATIVE BROWN: All right. Thank you all very much.

Thank you, Madame Chair.

CHAIRMAN: Thank you. Thank you, Representative Brown.

Whitney, did you have a follow-up question?

MS. METZLER: Doctor, you mentioned something about - and I'm not even sure how to frame this question

about lab testing, testing for certain labs, where you can pretty much determine what the results are going to be.

Is there something that needs to be legislatively or something that we, as the Pennsylvania General Assembly, should be doing, looking into about labs and the way things are being conducted as far as lab testing?

DR. JAHRE: The short answer to that is yes. And a lot of these labs that I have some questions about are not located in the state. So if you have a practitioner that wants to get a positive result, that practitioner oftentimes knows that they can send it to this kind of laboratory and they'll get the result that they're looking for.

Obviously labs need to be certified. Some of the tests that they've done are not certified tests. They're doing what we call PCRs on certain fluids, with reasonable validity.

So I think all of this is really ripe for some kind of oversight legislation.

CHAIRMAN: Thank you very much. Representatives, members, any other questions? Any other questions from the other presenters?

If not, I believe that President Marcia Welsh has some comments for us. And my thanks to all of you. You've done a wonderful job informing us. And I think the members

asked some very good questions basically based on the information that you have given us. So thank you very much for your time and effort and putting all of your comments together. We truly, truly appreciate it.

And Representative Brown, thank you for your hospitality here and getting the Committee here. So thank you. My thanks to all the presenters.

And President Welsh, if you'd like to come forward.

PRESIDENT WELSH: Thank you very much for coming. I really appreciate that the House Health Committee has given ESU the opportunity to host this important hearing. A special shout-out and thank you to Representative Rosemary Brown for all of her support of our Pennsylvania tick research lab.

ESU is a comprehensive public university. We really do have, as part of our mission, serving our region. And a good example, Friday, we had an economic outlet summit with 300 members of our community on our campus talking about the past, present and future of economic development in Monroe County.

And then today I think we've demonstrated quite well, through what we are doing with the tick epidemic, the tick-borne disease epidemic.

We have in this building, and you'll be able to

tour it after lunch, we have the Dr. Jane Huffman Wildlife Genetics Institute, which in and of itself is a mouthful. But it offers wildlife forensic services, population genetic services, and as you learned, tick diagnostics testing through the tick research lab.

As we all know, tick-borne diseases are at an epidemic level in Pennsylvania. ESU has demonstrated a commitment and the ability to be a significant part of the solution.

Nicole Chinnici is at the forefront of tick testing and research. And I know will continue to be a phenomenal resource to you as you determine what you want to do going forward.

We also want to be much more aggressive as an institution in our role for increasing educational opportunities for the medical community.

She forgot to mention it, but this is a coloring book and activity book that was done through the lab, along with new mind design, which is our student design group on campus. And it is an educational opportunity to teach young people about ticks.

It isn't just old people that need to know what a tick looks like, but making sure our children are educated, so if they see a tick, they will come forward and talk to their parents about it or say what is this?

So we do - Nicole, I think, is becoming the mouse pied piper. I'm a little worried about that.

Anyway, again, thank you so much for being at ESU and I hope you enjoy your stay with us.

CHAIRMAN: Thank you so much for your hospitality.

Thank you, ladies and gentlemen here in the audience. And I'd also like to say thank you to our video crew here from Harrisburg. They'll be putting this up probably on our website. So if you want to check in and rewatch everything, you're welcome to do that. And all the testimony, we still have copies of testimony available here on the front table. Thank you very much.

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HEARING CONCLUDED AT 12:05 P.M.

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