Certification of Minutes[1]

The Defense Health Board convened a meeting on 5-6 December, 2006, hosted by the United States Naval Medical Center, Portsmouth, Virginia.

I hereby certify that, to the best of my knowledge, the foregoing meeting records are accurate and complete. The meeting records include:

- The time, date, and place of the committee meeting.
- A list of the persons who were present at the meeting, including committee members and staff, agency employees, and members of the public who presented oral or written statements.
- An accurate description of each matter discussed and the resolution, if any, made by the committee regarding such matter.
- Copies of each report or other document received, issued, or approved by the committee.

Designated Federal Official:

Ellen P. Embrey
Deputy Assistant Secretary of Defense
(Force Health Protection and Readiness)

1/10/07
Date

1. Minutes of advisory committee and subcommittee meetings must be finalized within 90 calendar days of the meeting(s) covered.

UNITED STATES DEPARTMENT OF DEFENSE

DEFENSE HEALTH BOARD MEETING

Norfolk, Virginia

Tuesday, December 5, 2006

ANDERSON COURT REPORTING
706 Duke Street, Suite 100
Alexandria, VA 22314
Phone (703) 519-7180 Fax (703) 519-7190

P R O C E E D I N G S

DR. POLAND: This is Dr. Greg Poland. Welcome everybody to the inaugural meeting of the Defense Health Board. This is an historic occasion when you think of it.

We have come from the background and stand on the shoulders of the men and women who have served on the Armed Forces Epidemiological Board through a long and illustrious history.

And my personal intent as I try to help the Board transition during this next year from the AFEB to a larger committee, the Defense Health Board, is to make that a smooth transition and to try during this year to work out all the operational details and the details that are important to make this a smooth-running committee.

We're going to, later we're going to show a slide that helps people to understand what the composition of the Board is and how we're related to various task forces and scientific advisory boards, et cetera.

But rather than go through that now,

we've got some slides that will make it easier.

My personal intent is to take what we've learned on the AFEB and apply that towards the Defense Health Board.

We are, and, again, the intent is that we are an independent board, we're an authoritative board, but we're also an accountable board, and I think the line that I would like to see us walk is that we're not perceived as a thorn in anybody's side but rather a light, a light on the pathway as to what direction we go and what kind of information we need.

Sometimes people like light, sometimes they don't, but that's what we'll aim to do is to, is to provide light.

So with that as an introduction and thank you to all of you who have served on the AFEB and who come today certainly during this holiday season, which is a busy time, thank you for helping make the AFEB what it was, and I ask your indulgence in the same level, if not greater, given our expanded scope, level of energy and

input into the Defense Health Board.

So with that, Miss Embrey, may I ask you to call the meeting to order.

MS. EMBREY: Yes, this is Mrs. Embrey. Thank you, Dr. Poland. Now I will read the official greeting and the call to order. As the designated federal official for the Defense Health Board, a federal advisory committee to the Secretary of Defense which serves as a continuing scientific advisory body to the Assistant Secretary of Defense for Health Affairs and the Surgeons General of the military departments, I hereby call this first meeting of the Defense Health Board to order.

I'd also like to thank Rear Admiral Thomas Cullison who welcomed you earlier today for his willingness to host this meeting and the outstanding support that he and his staff have provided to the Board in preparation for today's and tomorrow's meeting.

Dr. Poland?

DR. POLAND: Thank you, Miss Embrey.

One of the traditions of the AFEB that I introduced and would like to continue through the Defense Health Board is a moment of honor and reflection.

There are hundreds of thousands of servicemen and women who are away from home, probably scared, anxious, but unwavering in their commitment to what they are doing as well as their family members and friends.

So if we could, I'd like to stand for a minute to recognize that.

(A moment of silence.)

DR. POLAND: Thank you all. What I'd like to do is to go around the room and introduce ourselves. For those -- I'm not sure how we're going to handle -- okay. We do have a microphone on the outside ring there.

And maybe if I could start with Miss Embrey and we'll work our way all the way around the Board and then stop with Karen.

MS. EMBREY: I'm Ellen Embrey. I'm the Deputy Assistant Secretary of Defense for Force

Health Protection and Readiness. I'm also the designated federal official for this Board.

DR. BLAZER: I'm Dan Blazer. I'm a psychiatrist and also an epidemiologist. I'm on the faculty at Duke University Medical Center.

DR. HALPERIN: Bill Halperin, chair, Department of Preventive Medicine, New Jersey Medical School, and chair, Department of Quantitative Methods, School of Public Health of the University of Medicine and Dentistry of New Jersey.

DR. SILVA: Joe Silva, dean emeritus, University of California, Davis, and professor of internal medicine.

DR. McNEILL: I'm Mills McNeill from the Mississippi Department of Health.

DR. SHAMOO: I'm Adil Shamoo, University of Maryland, School of Medicine. I'm former chairman of biochemistry.

DR. MILLER: Mark Miller. I'm the associate director for research for the Fogarty International Center of the National Institutes of

Health.

DR. PRONK: I'm Nikko Pronk, vice-president and executive director, HealthPartners, Health Behavior Group.

COLONEL STANEK: Colonel Scott Stanek. I'm the preventive medicine staff officer, Office of the Surgeon General.

COMMANDER FEEKS: I'm Commander Ed Feeks relieving Commander Dave McMillan as preventive medicine officer Headquarters Marine Corps.

LIEUTENANT COMMANDER SCHWARTZ: I'm Lieutenant Commander Erica Schwartz, Coast Guard Headquarters preventive medicine officer.

LIEUTENANT COLONEL HACHEY: Wayne Hachey, director of preventive medicine, Office for Force Health Protection and Readiness.

COMMANDER CARPENTER: David Carpenter, medical attache, Canadian Embassy.

LIEUTENANT COLONEL MULLINS: Lieutenant Colonel Andy Mullins. I'm deputy chief of public health at the Air Force Medical Operations Agency. I'm filling in for Colonel Michael Snedecor, the

normal member of this Board who cannot be here today.

DR. OXMAN: Mike Oxman, professor of medicine and pathology at the University of California, San Diego.

DR. GARDNER: Pierce Gardner, professor of medicine and public health at the State University of New York at Stony Brook.

DR. LAUDER: Tamara Lauder, physical medicine rehabilitation, Wanatka, Wisconsin.

DR. CATTANI: Jacqueline Cattani, professor of global health and director of the Center for Biological Defense at the University of South Florida in Tampa.

DR. KAPLAN: Ed Kaplan, professor of pediatrics, University of Minnesota Medical School, Minneapolis.

DR. LUEPKER: I'm Russell Luepker, and I'm a professor of epidemiology medicine at the University of Minnesota.

DR. BROWN: I'm Mark Brown. I'm representing the Department of Veterans Affairs.

COLONEL BADER: Colonel Christine Bader, special assistant to the NoradNorthcom main surgeon, and I will being moving shortly to OSD to work with the task force for the future of military health care.

DR. LEDNAR: Wayne Lednar, medical director, Eastman Kodak.

DR. PARKINSON: Mike Parkinson, I'm chief health and medical officer at Lumenos which is a part of WellPoint.

COLONEL GIBSON: Roger Gibson. I'm the executive secretary for the Defense Health Board.

DR. POLAND: I'm Greg Poland, professor of medicine and infectious diseases at the Mayo Clinic in Rochester, Minnesota.

MS. TRIPLETT: Karen Triplett, Carolyn Reyes, CCSI, contract support.

LIEUTENANT COMMANDER BROOKS: Lieutenant Commander John Brooks, preventive medicine resident working in Headquarters Marine Corps.

CAPTAIN SCHOR: Captain Ken Schor with the Uniformed Services University.

MAJOR SMITH: I'm Randy Smith, Joint Staff J4. I'm the Joint Staff preventive medicine staff officer.

CAPTAIN LaMAR: Captain Jim LaMar. I'm the director of population health at Navy Environmental Health Center.

MR. MITCHELL: Ben Mitchell, Navy Environmental Health Center, division of preventive medicine.

COMMANDER BATSEL: Commander Tanis Batsel, chief of preventive medicine, US Northern Command.

LIEUTENANT COLONEL VEST: Lieutenant Colonel Kelly Vest, deputy DoD-GEIS.

COLONEL ERICKSON: Colonel Loren Erickson. I'm the director of Global Emerging Infections Surveillance (GEIS) and Response System.

COLONEL JAFFIN: Jonathan Jaffin, deputy commander, U.S. Army Medical Research and Materiel Command.

OFFICER CHOW: Danny Chow, preventive medicine officer here at the Medicine Unit here at

Norfolk.

CAPTAIN NAITO: Captain Neil Naito, director of public health, Navy Bureau of Medicine and Surgery.

MAJOR HOLLAND: Major Francis Holland, Air Force, Population Health Support Division.

MR. CASTERLINE: I'm Dan Casterline, national account director at Merck Vaccine Division.

MR. GROSS: Jonathan Gross, Navy Environmental Health Center.

MR. RABOLD: Ridge Rabold, Armed Forces Institute of Pathology.

COLONEL ANDERSON: I'm Colonel Randall Anderson, the director of the Military Vaccine Agency.

MS. STAMPS: I'm Kathryn Stamps, epidemiology, Navy Environmental Health Center.

MS. GOODIN: Kate Goodin, Navy Environmental Health Center.

MS. OTERO: Karen Otero, Navy Environmental Health Center.

MS. NADAL: I'm Teri Nadal with the Navy Environmental Health Center.

COLONEL BUNNING: Mike Bunning, representing Wilbert Hall, Lackland Air Force Base, commander for basic trainees.

MR. CROOPER: Lee Cropper, representing Air Force Institute of Operational Health.

MR. DICKEY: I'm Brad Dickey with the Center for Naval Analysis.

COMMANDER RUSSELL: And Kevin Russell, head of the respiratory disease laboratory in San Diego, Naval Health Research Center.

DR. POLAND: Carolyn, do you want --

MS. REYES: Carolyn Reyes with CCSI.

DR. POLAND: Thank you. Just a reminder to the Board, this is an open meeting. Press and media may be present. Our deliberations will occur in an open meeting. Administrative deliberations will occur later in a closed executive session.

So Colonel Gibson has some administrative remarks and then we'll begin the

afternoon session.

COLONEL GIBSON: I want to thank Admiral Cullison and his staff for supporting us in this meeting as well as the folks here at Little Creek. They've done a wonderful job and they have a beautiful venue for us. It's turned out quite well. And I hope you all had a -- enjoyed the tour this morning.

Please sign the attendance roster outside the room if you haven't done so at this time.

Those of you who are not seated at the tables, there are handouts that will be provided in the back of the room.

You know where the bathrooms are. They are right outside, right outside the room here.

See Carolyn or Karen regarding telephone, fax or e-mail messages, et cetera.

We'll have refreshments for this, for this meeting right in back here. Please feel free to use -- please feel free to partake of the food there as you wish.

And I'll repeat what Dr. Poland said. This is an open meeting. It's open as required by Federal Advisory Committee statutes and the session is being transcribed. So please speak freely -- or speak clearly.

We'll have a Navy SEAL demonstration tomorrow. Not only will they give us a briefing, but we're actually going to go over and watch them do a few things.

Everybody is welcome to attend, but I'd like to get a show of hands of the folks who are going to be here tomorrow to do that.

DR. POLAND: 4:30 in the morning. I'm kidding.

COLONEL GIBSON: Can you get a count here? Dinner tonight is at the Ship's Cabin, and we'll meet in the hotel lobby at seven o'clock to carpool to the restaurant.

Dinner is open to all attendees, and I know Karen checked with everybody on the, on the bus regarding how many people were going to come.

I want to -- anybody who wasn't with us

this morning, please let Karen know if you're coming. That way we have appropriate meals, et cetera.

Let's see. Next meeting is going to be March 20 and 21 at Fort Detrick, Maryland. This is our biowarfare counterterrorism meeting. It is going to be hosted by the Armed Forces Institute of -- or Military Intelligence Center and USAMRIID. Hope you all can attend.

DR. POLAND: Okay.

COLONEL GIBSON: One more thing. General Kiley will be giving a briefing this afternoon on the mental health task force. He's the co-chair. When he comes in the room, please show him the respect we do for flag officers.

Thank you.

DR. POLAND: Our first presentation and discussion will be on Group A streptococcal infection among military service members.

I think as many members are aware, the AFEB has a long history of really premier research and prevention initiatives related to

streptococcal disease. In fact, what we know to do on the civilian side came from one of the early commissions that dealt specifically with this problem.

The DHB is carrying forward the AFEB's interest in Group A streptococcal infection.

Commander Kevin Russell from the Naval Health Research Center, San Diego is currently the lead on the adenovirus vaccine trial at Great Lakes and will brief us on Group A beta strep control in military cohorts along with antimicrobial resistance.

While Kevin is coming up, I might say I've had a professional collaboration with him and Commander Ryan at NHRC.

The word you would use at Mayo for somebody like Kevin is he's a finisher.

The jobs that he has and the quality that he brings to it end up in a finished product that are always high quality and his presentations to the Board have been of great usefulness.

So, Kevin, turn it over to you.

COMMANDER RUSSELL: Thank you very much. I appreciate that, Dr. Poland.

Miss Embrey, distinguished guests, it's a pleasure to be here and it's always a pleasure to present to formerly the Armed Forces Epidemiology Board and now the Defense Health Board.

I have a lot to present and some slides that were challenging to put together with the quantity of data that we have.

That being said, I certainly don't have all the data here and I don't have all the answers.

I'm proud that many of my colleagues in the room, friends in the room, have a part of the picture as well, so I think we can all come together and address many of the issues that the Defense Health Board might have. And, of course, you know that Dr. Kaplan on your board is a world-renowned Group A streptococcologist, and it's an honor to have worked with him over the years.

What I'm going to share with you today is a little bit about the history of Group A strep. I think this is so important for members of the Board to have a little bit of understanding of, and this was a bit of a challenge for me, should I go into this at all.

I think I should, because I really think the truth is there's no pathogen that is more studied in the US military than Group A streptococcus. And so an understanding of the history I think will help give us a little bit of light to where we might go in the future and where we should go; some of the relevant instructions, what the status of those instructions are, what they say, current chemoprophylaxis regimens is a big issue, who's doing what and who dictates what they are doing, some of the service-specific implemented surveillance initiatives and then what we are doing at the Naval Health Research Center for Group A streptococcus, some recent outbreaks, I'll elucidate a little bit about that and a few fatalities that have recently occurred and then

bring together some of the conclusions of our laboratory-based surveillance.

Again, there's a lot of information here. I'm going to go through it quickly. I wanted it in front of the Board members for their reference, if need be, and I've actually put the entire references at the bottom of some of the history here.

But, again, in the military, long recognized as an important pathogen. World War II. In the forties some very elegant, in my opinion, studies on transmission of Group A strep. No pathogen is the same in the way it is transmitted. Group A strep might be unique from many others. But what they basically determined in some very elegant studies is person-to-person transmission is very important. They had studies using blankets that were heavily contaminated as to how much is the environment in the recruit setting contributing to the continuing problem with Group A strep.

Person-to-person was repeatedly found to

be very important.

Some issues of carriage and importantly here, the contributions of the sick call. It all came back to people being funneled through sick call for other reasons and that being a primary point where it looked like transmission and exposure was occurring.

Soon after this, the antibiotic era ensued. Great, we have a way to treat it, Group A streptococcus, and that drastically reduced the sequela that occurred from Group A streptococcus infections and even affected in many of these studies the carrier state. It provided near complete control of illness.

But the question was why do we keep having Group A streptococcus in our recruit training camps?

Because treatment alone was not effective. You continued to have spread from asymptomatic individuals or individuals, as we find often in the recruit setting, individuals that chose not to seek medical care but were still

sick, still infectious. This is a repeating issue with a lot of other pathogens.

So more recently it was the recommendation by Thomas and colleagues that streptococcal surveillance programs continue and that data generated from these surveillance programs should influence the prophylaxis decisions and often add to site specific, in a site specific way, and you'll see that has been implemented in many of the different services at the recruit training camps, and the regimen is 1.2 million units of Benzathine applied intramuscularly.

So the subsequent decades after some of this elegant Group A strep research demonstrated that although treatment got a good handle on the disease and the sequela in that individual, mass prophylaxis was effective in decreasing outbreaks in our recruits and again sequela overall as the population goes.

And when those mass prophylaxis efforts stopped, you continued to have outbreaks again.

They started over again.

A good study by Dr. Greg Gray who used to be a part of your Board and also my predecessor at the Respiratory Disease Laboratory found that a very small percentage of people that were identified as Pen allergic could be the nidus for continuing outbreaks in the recruit setting. As low as 7 percent of individuals that were identified as Pen allergic, therefore did not got the Bicillin injection, could harbor the Group A streptococcus and be the reason for continued outbreaks in the recruit setting.

So treatment of the Pen allergic is very important.

The rest of this I'm not going to go over in detail, but it's here, and basically it says that history repeats itself. We decide to stop prophylaxis, we have outbreaks again.

Basic -- I'm going to go over this particular issue in some later slides. But we had a 2002 outbreak of Group A streptococcus among Marines in San Diego, and that was published.

In this population at the time, 30 percent of the population was identified as Pen allergic and therefore given Erythromycin as the antibiotic to cover them for Group A strep, and the study showed that there was only 20 percent compliance with that Erythromycin in that 30 percent population. So, again, a large population that wasn't being covered.

Erythromycin and Azithromycin have also been shown in the studies to be effective.

This is a quick slide looking a bit historically at Great Lakes recruit training center, and this brings up an issue that we'll get into a little bit and an issue that the services are struggling with. If we decide to give Bicillin or some other antibiotic at the beginning of recruit training, should we give it again later in training?

Right here you see with the orange bar up top that Bicillin was used for incoming recruits. You still had some increases in Group A streptococcus illness. So at the red bar here,

they chose to do a second Bicillin injection in late trainers, and you saw the rates then fall.

Rates stay low for a while, they stop everything, they start coming up again, and again the need to do that late-training Bicillin injection.

A couple quick comments about relevant letters or instructions, correspondences in the past.

This Board at AFEB in 1983 made some very astute observations that have really guided the military through the years saying that there should be selective streptococcal monitoring programs continuing in the Navy and Marines, there should be tailored hemoprophylaxis based on that, those monitoring programs, and they mentioned two areas that should be studied, and that again is the desirability of a second dose of Bicillin and this issue of skin infections with Group A streptococcus as whether or not that's a case for Bicillin in and of itself.

And I might just add that early on it

became a bit of a paradigm shift. Early on, the use of mass prophylaxis was to decrease sequela. It was really a transition by Gunzenhauser I believe and colleagues that said, "Hey, we don't have much sequela anymore. Is it useful just for strep pharyngitis?" And it was decided it was because the sequela again are relatively rare.

There is a tri-service instruction that is currently near, if it's not there already at press, for immunizations and chemoprophylaxis, and it just basically says some general things when it comes to Group A streptococcus prophylaxis, that it may be required to terminate disease transmission and consider the Benzathine injection and that there should be a customized approach. Each service should develop their own. So that has led to the question of, well, what is each services's guidance?

There's a BUMED instruction originally dated 1991. It's currently undergoing some very intensive and renewed efforts to update this instruction.

The current guidance says that we should in the recruit training sites culture everyone with a sore throat.

That's been difficult and not largely observed, culturing everyone with a sore throat, because it is so common in our recruit training. Group A strep -- adenovirus, as you know, has a primary symptom of strep throat, and that's a -- the primary pathogen in our recruit training. So culturing everyone might not be reasonable.

And that the action points for decision about antibiotic prophylaxis should be based on surveillance at the sites.

And one largely used definition for when you should seriously consider it is 10 cases per 1,000 recruits per week.

I do know that in many services, that is absolutely not a firm number. They use their local preventive medicine assets to determine whether or not they should start, and if there are severe skin infections or severe outcomes at a lower rate, they will certainly consider it.

The current suggested revisions talk about treating Marine Corps and Navy differently. That's the last version I saw.

Just talking with Captain LaMar today, I think that some of those issues have even changed.

The other big change is rather than culturing everyone here is, quote, follow a validated clinical prediction scoring system to determine who to culture and who to treat, including following, including following morphology of the Group A streptococcus that is grown.

Those four criteria are here, and you grade it from 1 to 4 points to decide when to test, when to treat, as you read there.

And I think this might be a very positive change to the instruction. I am interested in the Board's input on this, and I think other people in the audience are as well.

I might challenge that even though it might be a validated prediction system in a civilian world, is it a validated prediction

system in the recruits that I think are a different population than our civilian populations?

This is a tough slide, and I regret that your handout is not in color. So please take notes from this slide because there is so much information here. There's so much information that my staff has been collecting to try and get a handle globally throughout the DoD, and you can only appreciate it in its colors.

So let me go through this briefly. The top line here for each of the sites is what type of prophylaxis is performed or what type of -- how do you approach at that site prophylaxis for Group A strep?

So the light green is they automatically give an accession dose. When they get to recruit training, they automatically give a dose of Bicillin.

The dark green here says that they do surveillance. You heard those instructions where surveillance should be the crutch, and that's the

guidance that's been given for many different organizations through the year.

There are some sites, as you can see if we just again concentrate on that first line, that do it seasonally. Lackland Air Force Base has largely done that for many years, going back here to 1998. MCRD (Marine Corps Recruit Depot) Parris Island has largely done that through the years.

And this San Diego is a bit unique here surrounded by the solid black, and you see here in the middle of the prophylaxis mode to your right that means an automatic second dose.

The Marines in San Diego are the only ones that give an automatic second dose.

For the Board members' information, Marine training is twelve weeks, Air Force is about six and Army and Navy is about eight. So the timing that the Bicillin injection will provide protection three to four weeks is an important issue of this whether or not a second dose is given.

This can be updated. At this point now

there's another square we could put underneath the end of this here in San Diego where they have started giving the Bicillin and Azithromycin to incoming recruits because of some recent outbreak problems there.

Now, the second line here is what antibiotic is given if they do do automatic accession dose. In general, I mentioned that it's Bicillin, and that's the light lavender here.

Some exceptions here include towards the end of Great Lakes and Lackland when the Bicillin has been in short supply, as you all are aware, right up here the period where we have had problems with Bicillin supply. During those periods Great Lakes has chosen the oral Penicillin 250 BID, and recently, recently San Diego has moved to, as I mentioned, they got Bicillin recently and they are giving that to all new recruits but they are giving Azithromycin. They caught up with all of the recruits on board with a 500 Q (weekly) week dose of the Azithromycin oral.

The last here is if you have Pen

allergic individuals, what are they giving them? What do they do?

So you see here at most of the Army sites, there is no treatment for the Pen allergic.

At Great Lakes for the Pen allergic, they use Erythromycin. Great Lakes Erythromycin -- remember that. It will come back as we look at some data -- 250 BID (twice a day).

Lackland has used Erythromycin for several years. In more recent times as the Pen allergic -- to Pen allergic individuals, they give Levaquin.

Parris Island again during the periods they are giving prophylaxis, they give the Erythromycin.

And MCRD San Diego is unique in giving to the Pen allergic always Azithromycin, again the 500 Q week dose.

What is not shown here is the waxes and waning. This is general policy over time at these sites. Because so much of this is driven by surveillance, that certainly has changed, and to

get a handle on that retrospectively for much time at all is difficult. There are just spattering of publications and things like that.

But I think this is very useful again for the Board to consider generally what is done throughout the DoD, and there's a lot of information there, so thank you for letting me take a little bit of time there.

Questions about this particular slide? There's so much information here, I don't want to pass it too quickly.

Okay. I'm going to jump real quickly to a couple different types of data that's shared by the different services, and this is more service-generated data. Each site has more detailed data that they share.

Here Great Lakes you'll see during the period now that actually the pink is the, is 2006, and this is strep pharyngitis per 1,000 recruits. You remember the kind of cutoff was 10 per 1,000. And you see here this year when the Bicillin has not been available and they have been using the

oral Pen VK, some rates that are concerning at Great Lakes. They are not using the Bicillin yet, although they are supposed to start that probably the first of the year and then continue to use the Pen VK. And there are compliance issues just like you've heard from me with Erythromycin is really getting people to take this.

Some Army data. There are two different indexes here. The pink is the acute respiratory disease and the jagged blue is the SASI (Southeast Asian Serials Index) index.

The SASI index is calculated by taking the rates of Group A strep positive swabs and multiplying that by the rates of ARD (Acute Respiratory Disease).

So in general, the SASI rate for saying there's a concerning situation here is 25 and here on this axis is the 1.5 which is the traditional rate for ARD, quote, outbreak. I'm going to point out several places here samples that we have analyzed in our outbreak investigations at the Naval Health Research Center.

This period here encompassing both those peaks we have samples from and I'll talk about the results of, Fort Leonard Wood right in here, Fort Sill this period here. And unfortunately I got it after I handed this presentation in, but there's similar charts for the Marines, one in San Diego I mentioned that they recently started the Bicillin and Azithromycin throughout their recruit training. And you see basically in the Marines in San Diego a curve that goes up like this with Group A strep positive cultures and then drops completely down to baseline now that they've started prophylaxis of all incoming recruits and catching up with all recruits on base.

So what did the Naval Health Research Center do?

We instituted surveillance for Group A strep in 1998. It's a systematic sample of Group A strep positive samples that are collected from laboratories at nine different military training sites.

I need to point out quickly the big

weaknesses to that.

I do not have staff on the ground to collect these samples and ship them to me like we have on the ground at each of the recruit training sites to collect our febrile respiratory illness or ARD data and samples. We rely on the relationship that we establish with the laboratories at the hospitals that serve the recruit training sites. We rely on maintaining those relationships and getting them to save samples and ship them to us.

We send everything to them, we pay for the shipments, but it still requires time on their part, and that's hard to maintain over time. So at any one site it seems to wax and wane. That's the big disadvantage.

I think the big advantage is we definitely have a collection that is DoDwide, geographically dispersed, temporally dispersed over time, and we can follow trends to the samples we do get in.

But what is very difficult for us to say

with the data we get is the true rates of streptococcal illness, I don't have that.

What I do know is NEHC (Navy Environmental Health Center) is looking at that very actively right now and has some good data looking at Group A strep, laboratory diagnoses, whether it's the rapids test or the culture, and they are looking at that because of the instruction that's under revision to make sure it's as accurate as possible and addressing the needs of the Navy Marines. But, again, what it does tell us is the samples we get and what's happening with Group A strep in our population.

I want to stress from the slides I'm showing that when I'm talking about collapsed data or data altogether, I'm not including the outbreak specimens we received. I didn't want to overbias the data with a whole lot of, say, M3 from the 2000 EMM type (a gene associated with virulence) of Group A strep from the 2002 outbreak in San Diego, for example. I pointed out some of the outbreaks we do get samples of and I talk about that separately.

So as I mentioned here, the samples we collect with the routine surveillance, looking at antibiotic susceptibility as well as EMM type, which is a marker for virulence, it's a very useful tool from a molecular epidemiology perspective to follow the strains that are circulating in our population and then the outbreak response.

This quickly just gives you an idea of the geographic spread. The streptococcus pyogenes is the green square there of the samples that we do get in.

A quick -- to bring to your attention real quickly what we're looking at here is nearly 2100 isolates and the characteristics of those isolates.

Back in 2003, we published on isolates that we received up to that time through 2001, 692. Those 692 are included in the data I'm showing you right now. It's just many more, about two, three times as much or so.

I want to point out to you this number

right here at that time, and what we reported was among those isolates, there was 6.4 percent resistance to Erythromycin overall, and that that macrolide resistance was associated with geographic site, Lackland, and that it was also associated very strongly with EMM type 75.

This is a quick look at the isolates we received, a simple number of isolates received and analyzed over time from the different sites. This is collapsed through the 1998 through 2006 period.

Now, the paucity of samples in some sites does not necessarily represent poor collaboration, although it might. It often will also represent or demonstrates the fact that they might not have a lot of Group A strep problems.

So, again, looking across the board, we look at all of the different antibiotics and the resistance patterns, 100 percent of these 2,077 isolates were -- antibiotic resistance was performed on them.

And what we see now looking over this whole time, again including that early period that

had 6.4 percent, is around 11.6 percent Erythromycin resistance.

So we become concerned. Are we having increasing problems with Erythromycin within our populations?

It's a question we need to ask, a question that often comes up when people decide what to use as a secondary antibiotic.

We have to look at this more closely, though, to really get to that answer.

Let's look at that over time. Is it increasing over time?

So here you have the different -- Tetracycline is the second most common resistance we've seen.

But what you see here is some big-time issues with increasing Erythromycin resistance through 2004, but in recent years very little.

So in 2004 we'd be seeing this nice upward trend and say, "Oh, my goodness, what are we doing? The use of Erythromycin in these training sites, are we introducing this macrolide

resistance?" Good question.

But here seeing it so low makes one think, hum, it didn't stick around. That's interesting.

We need to tease this out more, though, because it's possible that at some sites it is influenced. Not all sites use Erythromycin.

So we want to get to this a little bit more. Let's look at each site. So this is each site just grouped again. And you see Lackland, as I mentioned, has about 20 percent. Fort Leonard Wood, important. They have current issues. MCRD Parris Island, some of these sites. So I want to look closer at those sites over time.

First a quick look at the EMM types because I get kind of an association between the EMM and antibiotic resistance as well.

A little bit of a busy slide but again a lot of information.

The trends I want you to see is this right here is EMM type 75. It's proven to be very important, and you'll see why.

And the other one I want to point out to you is the light lavender, this here. This is EMM type 5.

So in the scheme of this whole period, EMM 5, for example, isn't a whole light. You do see quite a bit of the EMM 75.

For your information, the 3 was the outbreak in San Diego of Group A, B-Hemolytic Streptococci bacteria GAS-associated pneumonias.

Okay. So I mentioned what I want to do, though, is now look at those sites that had a big problem with Erythromycin resistance and break it down over time. Is this Erythromycin resistance increasing?

What you have here is a slide of Parris Island over time and the strains of Group A strep that we see there, basically the EMM strain.

The pink here is not determined yet I think because, one, we have 100 percent antibiotic resistance performed on these samples and, two, you can see some good trends with those that we do have EMM type that our conclusions can still be

pretty sound at this point.

So here what you have is simply the EMM types, and right here what we have added to that same slide is resistance to Erythromycin.

The resistance is represented by the line. I want to bring to your attention here that the dark blue, EMM type 75, is very often resistant, and among those that are not typed, I think there's a good reasonable assumption that a good percentage of those are EMM 75.

Those that we chose to do the EMM typing with were randomly selected.

Yes.

MS. EMBREY: Ellen Embrey. Could you explain what EMM is?

COMMANDER RUSSELL: Sure. Traditionally something called the M protein was used to do a lot of this work. But the EMM is a gene that is associated, can be associated with virulence of the Group A streptococcus in itself.

So this is doing PCR (Polymerase Chain Reaction) of the EMM gene and sequencing it and

then looking at -- there's, there's a very large database maintained that helps you take that sequence and determine the M type from that.

Dr. Kaplan might have some input here. But there's -- there certainly is an association between that and the M protein, not the EMM, but the M protein was based on antibody antigen interactions of the, of the bacteria which we're now shifting to molecular methods.

MS. EMBREY: Thank you.

DR. KAPLAN: Ed Kaplan. Just -- Kevin has said this correctly, but formerly we serotyped these strains with serological typing.

By sequencing the gene now, we can do the same thing a lot faster, a lot cheaper and a lot more accurately. So it's another way of characterizing.

There are now approximately 130 plus EMM types among Group A strep.

MS. EMBREY: Okay.

COMMANDER RUSSELL: So the association again between Erythromycin resistance and EMM type

75 is noted here on this slide in 2002, 2003 and 2004 and largely with EMM type 75.

That was an observation that we made in the publication from data here back.

Although at Parris Island they hadn't seen that yet, overall, that was the observation made then.

Let's look at Lackland Air Force Base. Lackland again is the place that we previously demonstrated an association between site and Erythromycin resistance.

What is happening now? There are isolates we've received from Lackland, and here's adding the Erythromycin resistance.

Guess what's gone from Lackland? There's not much EMM 75 there in Lackland anymore. And, by golly, they don't have much Erythromycin resistance anymore either. You see the EMM and the Erythromycin resistance again back here that heavily contributed to our observations in our previous publication.

Fort Leonard Wood, again the different

EMM strains and then adding the Erythromycin resistance to that again, seeing it very heavily associated with EMM 75.

Let's jump to the EMM types and look at Erythromycin or macrolide resistance, and you see the 75 very -- about 60 percent of all isolates we get that are EMM 75 are Erythromycin-resistant.

A little bit here in 5 and a couple other, but largely with EMM 75.

I'm going to jump now, if you don't mind, to recent outbreaks.

And, again, there are people in the audience that have spent a lot more time really doing the epidemiology behind these outbreaks, and if I misrepresent something, I very much welcome you to jump in. We try and get samples from outbreaks so we can follow what strains are causing problems in our military populations.

At MCRD San Diego just recently in November 2006, five recruits were identified with retropharyngeal abscesses. Two of these showed Group A strep from those abscesses.

We obtained an isolate from one of those, and it is EMM type 118 just fresh off the press.

Fort Leonard Wood in October, short on Bicillin. They were not using an alternative prophylaxis at that time. They had an invasive GAS report in August of 2006 and then several cases that came after that.

We got a variety of these samples, and all of this outbreak at Fort Leonard Wood just recently in October are EMM type 5. There's a spattering of some others, but largely EMM type 5 that we saw in that outbreak.

It is Pen sensitive. The EMM that we're seeing in all of these outbreaks are Pen sensitive. They are not Erythromycin-resistant strains.

Fort Knox, August 2006, receive more samples. They did some kind of carriage. Saw quite a burden of carriage there, some hospitalizations with Group A strep, and they did some target prophylaxis at that time. But, again,

an analysis was EMM type 5, Pen sensitive.

Fort Jackson, November 2005, a bit of an outbreak. We got some additional samples. Nothing terribly serious at that time. But, again, a noticeable surge in cases, EMM type 5, Pen sensitive.

Fort Leonard Wood, October through February, quite a period as you saw. I showed you on that surveillance map. Got samples throughout that period, EMM predominated, Pen sensitive.

MCRD Parris Island, September through November 2005, again, EMM 5, Pen sensitive.

Talking about recent outbreaks, I have to go back to the one that I mentioned several times in San Diego. This we published on. Dr. Kaplan is a co-author on that, and we certainly appreciate his expertise through all of this.

But what I want to point out here is first dose of Penicillin was given at this point, and these, the light gray-shaded columns are those pneumonias that were associated with Group A strep, and you see them start to come up just

after 20 days from receiving the Bicillin injection.

So the question that has occurred because of this is how long is that Bicillin really providing protection?

Historic reports I believe Dr. Kaplan's going to talk about, very historically we really think four weeks, some studies in the military go more down to three, and this certainly suggests more down to three.

Interesting here that, again, in the Marines I told you twelve weeks of training, San Diego, they do give the most -- the most conservative of all training sites do give a second dose. So at the time they are giving a second dose here and there was a second blip of GAS pneumonias in that population.

Again, in this population they had identified with very loose determination of Penicillin resistance -- or Penicillin allergies, excuse me, 30 percent. So 30 percent were given Erythromycin with only 20 percent compliance with

that medication.

Some recent fatal cases. The very recent one, which I'm sure very many of you are aware of, happened at the advanced training course north of San Diego, Camp Pendleton, just out of recruit training about a week but not in recruit training anymore. Outside that twelve-week period.

He was tested post-mortem and found to have Group A streptococcus in his blood growing out of his blood.

There was a lot of hysteria and concern that came as a result of this saying that it's because MCRD San Diego wasn't using anything in place of the Bicillin injection during the shortage of the Bicillin and pointing fingers at MCRD San Diego for the cause of this death.

Many of us quickly said that it's unreasonable to do that because the Bicillin injection would not provide coverage to this period.

Whether or not you would have affected

the carriage state, maybe this person with not being exposed is certainly a different question. There's only person I know that could answer that question, and it's not me.

In Texas in March of 2006 coincidentally there were two different deaths that were associated with Group A strep. One was in the Air Force and one was in the Army. Neither one of these were recruits or near recruit training.

One of them had Group A streptococcus that was cultured out of purulent material from around the lung and had consolidation and the other had a meningitis type picture. Both of these two deaths were EMM type 5 Pen sensitive.

I wanted to quickly just point out as a surveillance from a laboratory perspective the Naval Health Research Center.

We've recently with DARPA(Defense Advanced Research Projects Agency) funding and now GEIS support as well as some other support are using what formerly was called the tiger, but it's the T-5000 that is a very powerful tool in our laboratory.

We renovated a facility at our lab, and you see that there's a lot of EMM data missing in what I have, and that's because over the last months we've been validating the streptococcus pyogenes plates that are used.

What is this? This is a high-throughput methodology for doing PCR conserved regions of genomes, conserved regions, so it's the same throughout bacteria. You then spray it into a mass spectrometer.

The mass spectrometer determines the molecular weight of that amplicon with such precision, that you know its base composition. You don't know the sequence, but you know its base composition. And when you do that a few times to conserve regions, it's almost always pathogen specific, not only pathogen specific, but it gives you a lot of information about the strain.

So in this case we published in PNAS (Proceedings of the National Academy of Sciences). It tells you the EMM type. In the case of influenza which is very hot these days, it tells you the

strain. It tells you the H and N type and the strain. It's most closely associated with Wellington, just like sequencing would do.

So my point here is although we have not been able to keep up with all the samples, when it comes to molecular testing, I'm optimistic in the future we will and will have a complete picture because of some advanced diagnostics that have high-throughput capability.

So some quick conclusions. There has been an increase in GAS morbidity among trainees since the loss of the Bicillin injection and the shortages in supply of the Bicillin.

Overall we have a macrolide Erythromycin resistance of 11.6 percent and that that is most commonly seen and highly statistically associated with EMM type 75. But these data, samples collected across the DoD, do not demonstrate any temporal or geographic trends in resistance of Group A strep.

There's increased prevalence of EMM type 5 associated with outbreaks throughout the last

couple of years, but they are largely Pen sensitive.

And I want to make one more conclusion based on that data is the one site where we have -- did have quite a lot of Erythromycin use at Lackland, it has not resulted in Erythromycin-resistant strains, one becoming responsible for outbreaks or remaining. That's one observation I think we can make. Always concerned about what are we doing with Erythromycin or macrolide resistance by using it in our populations.

Thank you for your time. Happy to entertain questions.

(Applause)

DR. POLAND: This is Dr. Poland. We're going to ask Dr. Kaplan to make a few remarks, but his slides need to be loaded.

While that's happening, we have a few minutes where questions can go to Commander Russell.

DR. McNEILL: Mills McNeill. Have you

observed any correlation in the rate of new infections of streptococcus associated with loss of adenovirus vaccine? Is there any correlation there that you've been able to detect in terms of --

COMMANDER RUSSELL: Whether or not the lack of the vaccine resulting in increased adenovirus rates have resulted in increased Group A strep rates with the idea that you're -- the body is compromised because of adenovirus infections, are you more vulnerable to Group A strep infections?

Excellent question. And the issue of coinfections is something that we are constantly asking. The big outbreak in around the time there at San Diego, we looked at the issue of coinfections, and I really wanted to write up a nice paper saying that coinfections were associated with more severe morbidity, but it didn't bear out.

I had as many coinfections among the febrile but not severe individuals as I did among

those that were hospitalized, surprisingly to me.

So at that time again I have not seen that that adenovirus, increasing adenovirus morbidity has resulted in increasing Group A strep morbidity.

And I think the graphs over time that all the services maintain bear that out.

We use Bicillin or some other mode to keep it low.

The question is do we use that around the clock, do we use that seasonally? When and how should we use that? Should we leave that up to the services?

DR. McNEILL: While as the preventive medicine physician at Fort Jackson a number of years ago, I won't say quite how many, I never understood why we were one of the posts that did not use the Bicillin prophylaxis, and this was still in the adenovirus vaccine era. And I strongly wanted to use Bicillin prophylaxis in our trainees, but it wasn't the policy, end quote.

So I for one feel that there should be

some standardization.

And having served ARD war duty, I can truthfully tell you it puts a tremendous burden on the hospitals and it also puts a tremendous burden on the trainees.

So I think this is something we need to look at and try to develop some uniform policy regarding.

COMMANDER RUSSELL: This Board influenced the policies that are in use to some extent now. We have the opportunity again.

DR. McNEILL: I stated my...

COMMANDER RUSSELL: Yes, sir.

DR. LEDNAR: Wayne Lednar. You mentioned about adenovirus coinfection. And I assume, but let me ask, is that true as well about meningococcal coinfection? Are you using the term coinfection and colonization synonymously?

COMMANDER RUSSELL: I don't know. The meningococcal issue is a very important one. I have done testing across the board when I've looked at the coinfection issues.

It is not a pathogen that is easy to study, I'll be blunt with you at this point.

We are exploring very vigorously how to improve our capabilities because capabilities for neisseria meningitidis that used to be in the DoD are being lost now.

So should someone pick it up and should someone look at it?

We think yes because of issues that are currently occurring in our military populations with the change in the neisseria meningitis vaccine that is being given, whether or not it is just as effective.

We engaged NEHC just recently on this to ask the question what is the burden of any neisseria meningitidis in our populations from a culture perspective, and they are actively looking at that with us. So hopefully we'll get a better handle on it in the future than we have now. Sorry.

DR. POLAND: Pierce?

DR. GARDNER: Pierce Gardner. Smoking

has been associated with colonization and disease for both pneumococcus and meningococcus.

I wondered if we have any data about percentage of recruits that smoke and whether you could detect any differences in disease rates among smokers and nonsmokers.

COMMANDER RUSSELL: We have some data on smoking in recruits as they arrive because of the recruit assessment program. But no recruit in any service is allowed to smoke. So their history of smoking might be associated. I've never looked at that.

Good question. Has anyone ever looked at that?

COLONEL BUNNING: Mike Bunning. A couple things that I wanted to address. The unintended consequences I do endorse as a method of prophylaxis using Bicillin.

But we have a couple unintended consequences that come out of that. Number one is yeast infections in the female population which are fairly significant in those first week or so

after the injection.

The other one is that we have a sole source manufacturer of this product right now that has really caused a problem for us in manpower, and being able to gen up and gen down manpower is not an easy proposition.

So when we go to Zithromax, that really impacts the pharmacy and our ability to package those drugs and get them out, and then we have to develop a new staff.

And oh, by the way, if you didn't know, recruits are not allowed to have medication. So it has to be distributed to them.

So there's a lot in this equation. The injection's by far the best way to go, but it has other, other components as well.

Thank you.

COMMANDER BATSEL: Commander Tanis Betsel from NORTHCOM.

Kevin, could you please briefly address with the T-5000 the time cost, employability, availability aspects particularly in my case for

identifying strains of influenza?

COMMANDER RUSSELL: It is not the answer that we're all looking for right now for influenza surveillance.

You saw two large decks there. It is a large equipment that costs around $1 million.

So the initial outlay could be expensive. The fantastic capabilities of this that are rapidly being used is going to the CDC (Centers for Disease Control), USAMMDA (United States Army Medical Materiel Development Activity, a variety of different places are acquiring this now and many health care facilities are acquiring this.

The great benefit of this is its broad-spectrum look, and you don't have to know what you're looking for with some of the applications. And I'll emphasize some of the applications. That doesn't apply to viruses where you don't have well-conserved regions across the board in the genome.

Cost. Again, with a broad-spectrum look at the plates, it's going to be around $100 a sample, I think. But the cost isn't

well-determined yet because it's not being marketed commercially yet.

COMMANDER BATSEL: And the time required?

COMMANDER RUSSELL: You can process -- we're getting ready to publish an influenza paper that processes 300 samples overnight within 12 hours, and that again is giving you not only H and N type but strain. So that's very strong.

DR. POLAND: Maybe one more comment.

DR. PRONK: Nikko Pronk. I was following up on the smoking question.

From a behavioral perspective, you indicated there are still, that there are still treatment regimens that are often ineffective because of care-seeking behavior or appearance.

How big do you think is the gap between optimal and current treatment rates because of that?

COMMANDER RUSSELL: I think that is a moot point when you talk about mass prophylaxis.

That was an important question when you

were just treating cases that came to health care.

So right now where the, where the status quo at all recruit training centers is looking at as many of the sore throats as we can and following the Group A strep rates with mass prophylaxis, it's not a question anymore as far as their contribution, in my opinion.

DR. POLAND: Okay. We're going to move on. We're about a half hour behind schedule.

I am going to ask the service reps to make a comment after Dr. Kaplan finishes, so just a heads up there, a status report on Group A.

So Dr. Kaplan is a member of the Board. He's from some other medical school in Minnesota.

(Laughter)

DR. POLAND: Go ahead.

DR. KAPLAN: I'd like to thank my country cousin for the opportunity to speak.

Thank you. I was asked to present a little bit of data which I think may address some of the questions that Commander Russell posed before you, and I'd like to thank him because I

think he's pointed out some of the real issues that are practical issues, and I might as well go out on a limb and start by rather than using the title that I have up here, change the title to deja vu all over again.

This organism is a highly transmissible organism and it has a capacity to spread rapidly and widely among susceptible populations.

And I think the military fits the definition of that.

I'm going to skip through some of these slides in the interest of time because I think Kevin has alluded to them, but there are some points that need to be made for the deliberation of this Board.

Everyone in here knows that the spectrum of a strep infection is a broad one, and we've seen in Kevin's talk the spectrum going all the way from pharyngitis to death, and I think it doesn't need -- nothing else needs to be said.

Let's look at the epidemiology over a time as related to the military and think about

issues that we have to keep in mind.

Quickly, we have to think about the organism, and Kevin has alluded to that. What is the organism, what is its virulence, and what is the potential for its spread?

We have to think about the human host, and we'll touch on that in just a second, about the susceptibility -- remember I said in susceptible human host, and then finally the environment.

And as has been shown for 50 years, the environment in the military is an ideal one for potential spread of this organism.

They have been a continuing medical problem in the military. And as examples, the Commission on Streptococcal and Staphylococcal Infections of the AFEB has been -- has toyed with this problem for years before the Commission was disbanded in 1972.

There were 27,000 cases of acute rheumatic fever in the Navy alone during World War II as an example of the magnitude or potential

magnitude in the problem.

There's a very famous and I'll show you in a moment the Great Lakes -- or the Bainbridge outbreak of acute nephritis. Skin infections in Vietnam posed a major health problem in the military. And as Commander Russell has just pointed out to you, there are continuing outbreaks in recruit bases even today without a uniform policy among the services.

The sentinel studies done at the Warren Air Force Base in the late forties and early fifties during the time of the Korean Conflict were examples of information, of our ability to gain information about this, and I'll go through it very quickly.

This was the famous barracks studies showing the distance of beds in barracks and the risk of spread of the organism as was studied by Dr. Rammelkamp, Wannamaker, Denny and all fifty years ago.

But we seem to forget that as recently as 1988, there was a major problem in the military.

And I put here two copies of the MMWR (Morbidity and Mortality Weekly Report) that pointed out the acute rheumatic fever again at Fort Leonard Wood and again at San Diego.

And if you look at that, and I'm not going to take the time to read that for you, this is from that. It pointed out the problem in the Army and the Navy during this 1988 outbreak. There were some 14 cases of rheumatic fever.

And at that time I was told by DoD that since it was service-related, it was estimated to cost the military approximately $1 million per patient, and that was 1988. So that's almost 20 years ago.

Deja vu again at the Naval Training Center in San Diego, again in 1988 with pneumonia. The attack rate went from 0.75 to 80 per 100,000 during that period of time.

So it keeps showing up, and it has since we've been able to track it.

This is the paper describing that outbreak in the JAMA (Journal of the American Medical

Association) in 1989 which gives you an idea of the number of cases of pharyngitis and the temporal relationship to rheumatic fever. I would also point out to you that type 5 is one of the most rheumatogenic strains that has been described over the years, and reminds you of Commander Russell's description of the spread of this organism or -- rather, the presence of this organism in a number of places in the military. And this is what happened at Leonard Wood in 1988.

So we have a highly rheumatogenic strain circulating in the military. Whether or not we have cases, I don't think we can say with certainty.

These organisms are spread across the United States, and without going into a very busy slide, what it simply shows you is that the types are spread regionally throughout the United States.

Now, why is that important that different regions seem to have different propensity for having a high prevalence of

different strains?

Well, it's really the epidemiology of, of streptococci.

For example, in this population here, one can see in some studies that we did some 30 years ago how an organism, in this case type 6, which is also a rheumatogenic strain, comes into a population very quickly and very quickly disappears.

In contrast, others, like in type 31, it hangs around for a long time.

Keep this, although these are civilian populations, keep this in mind as we think about what's going on in, in the military.

Because if you look at multiple types and their ability to spread through a population, as is seen here, and then at the bottom you look at the number of sore throats that occur, you can see that as new organisms are coming into the population as done by a prospective study, the number of sore throats and systematic disease increases.

Now, why is that important? Well, it's important because there are multiple strains that have the propensity to spread in a susceptible population.

And if you'll allow me to suggest that military recruit training bases are very much like junior high schools, I'll point out an epidemiologic fact which I think is responsible for this.

In the military training bases, people come from all over the United States, as you can see in green on this slide, and they are all put into the same environment, very close contact and the people coming from the Northwest have never seen the strains that come from the Southeast and on and on.

So people are exposed to strains that they've never been exposed to.

The same is true, if you think about it, with middle schools.

Middle schools are fed in any given city by multiple grammar schools, and the same thing

happens.

In fact, if you look at epi curves, you see in children a peak around 7 or 9 but another around 12 or 13.

And I think that these two situations are analogous, and that means it's not going to be anything that can be easily taken care of because it's not going to stop, and history proves that to us.

And when we get a very nice juicy mucoid strain like this and we put it into a population, you can see not only the fact that there is an outbreak, but there may be one caused by one type and one right after in another.

So what I'm trying to make the point is that these organisms come into a susceptible population, I can't think of a better one than recruit bases.

And I might add, as many of you know, this is not peculiar to the United States, but has been reported from military recruit bases around the world.

Now, if we think about it in the military, how are we going to address this issue?

And the question is, what do we do with prophylaxis?

Well, you've heard today that there is no uniform policy, as best I can figure out, either with the drug or with how it's given.

And I think this needs to be carefully considered by the Board in terms of making recommendations.

We all remember the studies done at Fort Warren 50 years ago which showed that treatment prevents rheumatic fever, the control studies for which the Lasker Award was given to Dr. Rammelkamp, Wannamaker, Denny, et al.

52 years ago Floyd Denny wrote only one of 143 patients studied developed a positive culture for streptococci during a ten-month study and there were no rheumatic fever recurrences when Benzathine Penicillin was used.

And so we've had a shortage as they've been brought about.

Wyeth who used to make this almost exclusively in the United States sold it to Monarch Pharmaceuticals who had some problems, and according to what Colonel Gibson has told me, in the last week the FDA (Food and Drug Administration) has finally approved their manufacturing facility in East Tennessee, so that hopefully most of this shortage will disappear. These are the original data from Gene Stollerman in 1952 showing the prolonged effect of Benzathine Penicillin over a three- or four-week period of time where it's -- the concentration is above the MIC (Minimal inhibitory concentration) for this organism.

And I thought in the interest of history, I would point out that there are more than one preparation of Bicillin. The one we're talking about here should be the LA Bicillin, not the CR.

And the difference in how these behave, in the interest of history, is a paper by Pierce Gardner who will maybe recognize this if he's still awake during this whole thing.

But the Bicillin is -- sorry. The

Bicillin is shown at the bottom of this and shows that they do keep levels, and Gene pointed out in his original paper, for up to 28 days.

And, in fact, it's been shown clearly in a paper by Wood in 1962 in the Annals of Internal Medicine that parental Benzathine Penicillin is better than an oral preparation, as you can see briefly on this, on this slide.

And it's been showed that you can break off an epidemic in the military, as shown in this JAMA paper in 1965 from the Great Lakes Naval Training Center, and you can see with the red arrow where Bicillin treatment was instituted and the epidemic tended to fall off.

There are four pressing issues as I see it regarding the use of Penicillin G in services: Availability, and perhaps that has been partially addressed at this point; the uniform quality of available preparations. They are all not the same, and I'll speak to that in just a second; what is the correct dose for the military? Jim Bass in 1996 pointed out that within military

recruits, 1,200,000 left the troops largely unprotected toward the second to the fourth week. I tried to get that paper before I came, and I could get the title but not the paper, unfortunately; and then as has been pointed out this afternoon, the military acceptance of Bicillin as the drug of choice.

Bicillin is made all over the world. As I point out, it is not the same. Here's an example of a study published 14 years ago showing that two different preparations, blood levels were quite different and the duration of adequate blood levels was also quite different.

So that while Bicillin is available around the world, all that glitters is not gold, as people say.

Wyeth made Bicillin, sold Bicillin made in three or four different places. One was Mexico, one was the US, and just for comparison, this is a Russian form of Bicillin that was, that was available. And there is variation, and this needs to be taken into consideration.

In a study that we did some years ago, we found that at 28 days after injection, only 44 percent of individuals had detectable levels of Penicillin and only 36 percent had levels of at least 0.02. That should be micrograms per milliliter.

And you can see from this curve how the percent of serum samples with detectible Penicillin levels fell over a 28-day period of time.

And so this raises the question as to is the dose that is being given, 1.2 million, is this an adequate dose? And this is something that has to be taken up and considered.

In the study that we did in Australia, we used 1.2, 1.8 and 2.4 million units. And as you can see from this graph, the more you give, the longer, the higher the levels are.

And I think this is at least worth considering when we think about this.

Now, does it work in terms of prophylaxis? Well, now we're going to stretch it

as a final slide or so here. This is a study done in Chinese school children in 1989. And basically what they did was to take two schools, and in one, the children were cultured monthly and everybody who had a positive culture, symptomatic or not, was given a shot of Bicillin.

In the other, everybody who was cultured positive or not -- if they were positive, I should say, were sent to their local source of medical care.

And what this shows is that while the prevalence shown on the top line started at the same place, quickly the test group with Bicillin shown in green fell down below the prevalence of those who got catch-as-catch-can medical care.

And also although the difference is not as striking, the same was true for the incidence of new cases of pharyngitis in the two groups.

So while this is entirely different from recruits, it does lend some credibility to the worthiness of prophylaxis in high-risk populations.

And I would leave that for you to think about and to consider.

So for consideration for the Board, we need to think about whether or not there is -- should be a uniform policy of control and reporting system among the services, and I think a discussion regarding uniform prophylaxis among the services certainly would not be a waste of time.

So the take-home message is that this organism remains uncontrolled and perhaps uncontrollable at the new millennium.

We certainly have evidence presented here today that it is still prevalent and that there are still, I think, worrisome deaths occurring in the military under those circumstances.

And this causes us to stay up at night sometime and think about what, what we should do about this.

And the latter part, the right-hand side of the slide will be after the meeting is over today with Dr. Poland's permission.

Thank you.

(Applause)

DR. POLAND: I wonder if we could hear from the service reps next and get an update on what's happening with Group A strep and their areas of responsibility.

COLONEL STANEK: This is Colonel Stanek. First I wanted to thank Commander Russell and Kaplan for those two excellent presentations. I think the presentation by Commander Russell gives a very unique and insightful look at the data, antibiotic resistance and certainly stimulated a few things that I'm going to go back and look at.

As -- actually pretty well what they discussed summarizes what has been going on in the Army.

Most recently has been the issue of the shortage of Bicillin. And as was mentioned, we are now -- we know that the company has received its approval, its manufacturing plan has been approved and there has been a distribution plan made out to distribute Bicillin to the different

training sites.

So I expect, I believe this month they will start using Bicillin again at the sites.

I think one of the key issues has to do with the alternate antibiotics which once the supply of Bicillin becomes consistent, then it may not be that much of an issue. But having an identified solution for what an alternate and secondary or tertiary drug of choice would be is something that we need to look at.

There are problems, as were mentioned, with letting the basic trainees have medicines and having to give medicine. They need to take a pill every day or couple times a day is a lot more difficult than sticking a needle in their arms once and creates issues for the instructors and everything.

But I think probably one thing that we definitely need to take another look at, a real hard look at is the plan for how at least the Army deals with the Pen allergic individuals. According to the chart, the Army does not treat

those individuals, and I think we need to look and make some sort of decision as to how we're going to handle those and what an alternate choice would be.

DR. POLAND: Any current outbreaks?

COLONEL STANEK: We recently had an increased number of cases of necrotizing fasciitis out at Leonard Wood.

Interestingly, those cases, the respiratory rates were actually below what our index would be.

I don't have the final report on that EPICON (Epidemiological Consultation) investigation that they did. But suffice it to say that Bicillin was not being used at that particular point in time because we didn't have it.

So I think we need to look at the final report from that investigation and then, as was alluded to, discussing with the other services if we're going to have a uniform policy or even among installations within the services.

DR. POLAND: So at least at the current

time, this is Dr. Poland, absent a shortage or lack of Bicillin, it would be used but once in the eight-week training period, is that right, for recruits?

COLONEL STANEK: I believe -- I'm sorry. Say it again?

DR. POLAND: They get one, the plan is that they will get one dose, but they get one in the eight-week recruit training period.

COLONEL STANEK: Yes, when we have the Bicillin available, that's correct.

DR. POLAND: The Air Force? We're heard from the Navy.

LIEUTENANT COLONEL MULLINS: This is Lieutenant Mullins filling in for Colonel Snedecor.

As far as some data from Lackland, I don't have exact numbers with me, but apparently we've not had any outbreaks or any blips or elevated levels of Group A cases.

We're using Azithromycin as the prophylactic drug because of the shortage of

Bicillin. I believe in January if it is available again, we'll start using Bicillin again.

And what I can do is when I get some more numbers that are more exact, I can forward those to Colonel Gibson so he can put them in the minutes.

Colonel Bunning brought up a good issue that the Board when considering policy or dosage or should it increase dose, just other collateral issues of increasing yeast infections in female recruits and other things for consideration and as we go forward, think about a policy or a different level of dosage, so...

DR. POLAND: Dr. Poland. It will be interesting to have the actual data on the yeast infections. Maybe Commander Schwartz from the Coast Guard?

LIEUTENANT COMMANDER SCHWARTZ: Hi. This is Erica Schwartz.

Coast Guard policy is that we don't have a policy on Bicillin. We have not had a policy and historically we have not seen outbreaks.

DR. POLAND: Okay. Discussion?

CAPTAIN NAITO: Captain Neil Naito, director of Public Health, Navy Bureau of Medicine and Surgery.

So just a little different take from what Commander Russell gave from the, you know, 30,000, you know, foot level because I was involved with getting information on both, quote unquote, outbreaks, both at MCRD Parris Island and also in San Diego.

So one of the things of note is that by the definition we've been using of ten cases per thousand recruits, both of these situations would not meet that definition of active prophylaxis.

So that's one of the interesting problems that -- is that the small clusters, however, do present a problem because in the case of MCRD, five retropharyngeal abscesses potentially were very serious.

And, again, there the thing -- the problem at MCRD Parris Island was that, again, with the Bicillin shortage, there was a plan for

active surveillance but because of changes of personnel, the changing in, you know, going from just giving prophylaxis to active surveillance, although it was written in the plan, it was difficult to switch gears and go with that implementation.

So, again, the prophylaxis does have its advantages in that it does attack the small clusters which potentially -- five retropharyngeal abscesses, one of them was fairly serious, potentially compromised the airway, et cetera, et cetera.

So, again, that's one of the interesting things that these small clusters, they do present a clear, you know, problem.

So, again, one of the things with the prophylaxis, even with the ones where we have a very good active surveillance program such as at San Diego, you start prophylaxis, the problem again is personnel change, and so programs potentially, you know, could have problems there.

So that's one of the issues that needs

to be considered by the Board.

One of the other also big considerations for the Board is that, prophylaxis is that it does -- again, sometimes the adherence to other important measures such as hand-washing, those types of issues need to be considered as well. Sometimes the adherence is not as good as it should be.

Again, past experience and emphasis has been placed on that, but, again, as personnel move on, emphasis could become variable again until something else happens.

That's from the Navy perspective.

DR. POLAND: Okay. Are there any other comments?

Go ahead.

DR. PARKINSON: Mike Parkinson. I guess just to refresh my mind, historically is it true, yes or no, that the number one cause of recruit training-related deaths is Group A beta-hemolytic strep, yes or no?

If that is true, and I think it is, over

five, ten, fifteen, twenty years, it certainly is probably true historically for whatever cause, then you raise the bar and make a better argument to the line that a standardized approach to the number one cause across all three services of recruit training deaths needs to be uniform.

If that statement is not true, then putting aside our medical backgrounds, we could say, Well, it's rational to have three different approaches because it's got to be based on the fact that San Antonio's in Texas and the fact that Great Lakes is in Chicago in the winter and they always seem to be different and the historical rates in the Air Force are less.

But if it's true in all three services and DoD in aggregate that the number one cause of recruit deaths in 50 years has been Group A beta-hemolytic strep, then it would seem to me that a standardized approach, regardless of the nuances for the last five, ten, fifteen, thirty, fifty years, should be taken.

And I'll just leave that there, because

if you look at the epi triad: Agent, host, environment, we know a lot more about the agents through advances in technology and the EMM-typing and the sophistication now in genetics on top of EMM-typing, people are people, they still come from all over the United States, as Dr. Kaplan said, which is exactly correct, and the environment, I hope we maximize the environmental systems and the circulation of air and the spacing of the cots and the rooms which we've all seen.

We've done about as much in most of those sectors as I think we can, and that puts you back to an effective prophylactic regimen that most of the time for most people should work in a best practice mode, not 16 different variations.

But that's the only thing. I think it's a compelling way to think about it, perhaps might be useful.

DR. POLAND: Okay.

DR. KAPLAN: Ed Kaplan. I just wanted to know how many cases of necrotizing fasciitis you had at Leonard Wood?

COLONEL STANEK: This is Colonel Stanek. There were three cases, but they were, if I remember correctly, be careful here because I'm trying to remember exactly what the time frame, they were not all at the same time. They were spread out over I think five months. I'd have to go back.

DR. KAPLAN: Any deaths among those three?

COLONEL STANEK: No, I don't think so.

DR. KAPLAN: Okay.

DR. POLAND: Joe?

DR. SILVA: Joe Silva. Two wonderful presentations. And I agree with some of the comments being offered that a standardized approach probably should be looked at to be developed.

But I also would urge for some wisdom to be applied here, and that is just hearing about the women that receive the Bicillin, how many of the women recruits come down with streptococcal infections?

There may be things intrinsic to the way they live, their barracks are arranged, their sense of cleanliness, whatever, that you may want to engage in a prophylactic regimen.

But I think the military has to be on guard, because coming down the pike are community-acquired staff aureus, and these are bad folks.

But that thing has picked up some mobile elements, and it's knocking people off in the community.

And I don't see why the military camps will not see even more, and they have seen some.

So there may be. I guess what I'm asking for is at the local level, a greater degree of sophistication when these horrendous cases occur, jump on them and do a full analysis, sort of like we would do in a hospital for infection control.

I know in one of our hospitals ten years ago we had an outbreak of streptococcal wound infections. Took a lot of work, but we found out

a nurse, a scrub nurse was carrying streptococci and apparently shed enough there that it did enter the wounds.

Curing her streptococci, the wounds went away, the infection.

So there may be a need for enhanced, more microscopic review of these cases when they occur, these sentinel cases, and jump on them.

Thank you.

DR. POLAND: Bill?

DR. HALPERIN: Bill Halperin. Clearly there's a prodigious amount of information presented in the two presentations, but it's largely presented in a way that's not familiar to a chronic disease epidemiologist.

It seems that there are two questions on board. One is, does use of prophylaxis bring an epidemic to control once the epidemic is already underway, and clearly in the data there are a couple of examples where it does bring an epidemic to control.

What's not clear and maybe it's within

the historical wisdom of the group, memory of the group, is whether anybody has ever not intervened in an epidemic and what would happen then. Would they run out of steam or would they keep going?

Now, I'm not proposing that that is an experiment that one would ever want to do, but I think looking at the data, one could ask from the natural occurrence of things that have happened whether there's any information on that. That's question number one.

Now, question number two is a little bit different, which is clearly, I don't know which slide it is, but there are obviously lots and lots of training sites and lots and lots of different ways of different policies that are implemented.

So the question would be in instances where there has been prophylaxis, what is the occurrence of, quote, epidemics versus in the circumstances where there hasn't been prophylaxis, what is the occurrence of epidemics?

And, I mean, I'm sure the wisdom of the group would have a number so that one could

compare essentially the risks where there is prophylaxis versus the risks where there isn't, but not one by one by one by one, but on, you know, the rate of epidemics versus the rate of no epidemics or the incidence density of infections where there is prophylaxis versus the incidence density where there isn't.

But I think these are two separate questions that beg to know what's the rate where there is prophylaxis, what's the rate where there isn't prophylaxis.

And I'm sure people who are more familiar with this understand it, but I can't tell what the answers to those things are from the data that's presented.

DR. POLAND: Okay. One last comment. We need to move on to the next...

DR. KAPLAN: The experiment had been unwittingly done, the answer to your first question. There has not been mass prophylaxis given in Salt Lake City since 1985 and there have been more than 600 cases of acute rheumatic fever

in that community since that time, and it's continuing and, in fact, bimodal at that point.

And then the other one is not, is not an adequate answer to your question, but if you saw on that Great Lakes slide that I showed you, the attack rate was something like.75 per 100,000. When it got into the middle of that nephritis outbreak, it went up to 80 per 100,000.

So the question I can't answer is whether there was prophylaxis.

All we can say is there was no strep. So you have to infer that that's what we...

DR. POLAND: Okay, thank you. Our next speaker this afternoon is Lieutenant General Kevin Kiley, the Army Surgeon General and co-chair of a Congressionally directed DoD task force on mental health.

The Board members are aware that this task force is a subcommittee of the Defense Health Board.

Dr. Kiley will update us on the mental health task force activities.

General Kiley, honored to have you with us, and the floor is yours.

GENERAL KILEY: Please sit down, sit down. Thanks very much. Thanks to all of you, and I appreciate the opportunity to jump ahead here of a couple of presenters.

I'm here to just give you a real quick update on how the task force is doing. And, frankly, the bottom line up front is they are doing an absolutely outstanding job.

Tom Burke and the administrative staff have done a great job of supporting us.

Shelly MacDermid in particular, is my co-chair, has just done trojan work in terms of continuing to collect data to drive the organization in terms of both the small details and the broad vision for the task force.

And then we made a decision a little bit earlier, I'm not sure if Shelly briefed that to you back in September I think when you were in Annapolis, but Colonel Dave Orman is full-time detailed to the task force now, and he's been the

chief of psychiatry at Tripler, is my former consultant in psychiatry, former program director. And he's now volunteered and has been doing a lot, a lot of the traveling -- and this briefing is more travel log than it is anything in terms of the results, although we may talk a little about that. I'm a little hesitant in, both in public forum and also because we're still in the formative stages to start talking about findings.

But Dave and Dick McCormick have done a magnificent job of getting around to a whole host of places to work our way through what we think we need to do for this task force.

This is, the purpose of this brief is to just update you from September through December.

We have used several different ways to gather information. Frankly, philosophically, we're taking all interested parties and all their information, anything they'd like to tell us. We've had meetings. I'll show you a list of those. We've had direct testimony from individuals and from representatives.

As an example, we were in San Francisco. We had the mental health officer for California National Guard come and talk to us.

We've clearly had and continue to have and we'll have scheduled here in a couple weeks in Washington subject matter experts to brief us in their areas of expertise.

And then the task force is doing literature reviews, generally gaining a large body of knowledge and also data.

And as we've gone through the executive session discussions about notional findings, notional recommendations, and I want to use those terms advisedly right now, our concern is that, you know, one does not a series make. We want to make sure that if we think we see a trend or there is an issue in the system somewhere, be it with the VA (Veterans Affairs), with the military, with the private community, that it's not, it's not a series of one where we've got data to back up our position.

So we're working our way through those. A lot of that discussion goes on in our executive

sessions. We did meet at Fort Hood as a full task force in these meetings, these ones you've seen at San Diego and then we spent a couple days out in California both at the Palo Alto VA and San Francisco VA. We've got all but usually one or two members. Then we're going to meet again here in Washington in December for three full days.

And then in January with the task force, we'll meet again in Fort Lewis.

We also work by e-mail, as you might expect. And task force members and subcommittees meet by telephone on a regular basis discussing issues and findings.

The site visits are not the entire task force. They're usually one, two, sometimes three members.

One of the great values of Colonel Dave Orman is that he can tell the emperor when he has no clothes.

In this case, he's intentionally volunteered me not to go to any of these site visits because his concern is a three-star general

walking in to sit down with some captains and colonels and talk about something is intimidating.

On the other hand, he and Dick in particular are very disarming, very perceptive in a very positive way and have done a nice job of getting around to visit and talk with garrison, hospital, community-based services at these installations, spent a lot of time out at Tripler. And somebody had to go to Hawaii, and I went out to Hawaii and enjoyed it out there.

They've also taken overseas trips. They've been to Okinawa and Korea and done visits both at Osan and one-to-one in Seoul.

So I'm confident that we're touching all the bases. We're not focused just on Army or just Marines and Army, but we've got -- we're talking to communities and leaders across all the services.

We were at Pendleton. In fact, I went to Pendleton, talked to the two-star there. He was, he was not intimidated by the three-star general.

Spent a lot of time at Fort Bragg, at Polk, we've been to some of these Air Force Bases.

Again, I say two, three people off the team go, spend a day or two, sometimes longer, and then report back on their findings.

We've got a whole host of future visits. We've actually got Deb Fryar headed over to Europe to meet -- she's been invited over as a task force member to meet with a conference that's going on over there. She's pretty excited about that. I think we're going to get some good feedback.

When we started out, I think there was a sense from the task force that if we went to a couple of places, we could get a sense.

And I came back to the task force and said, "Look, I think we need to see a lot of places," because when all is said and done and we're, we're being reviewed and graded on our effort, you know, if there's something that's been going on at Fort Carson or something's been going on at Fort Bragg and if there's been something with the Marines and we haven't visited a whole

host of those places, then people are going to look at it and say, "You really haven't done the due diligence."

And I'm very satisfied that we're going to a whole host of places. You can see we're going to be in Europe in late January, early February.

And then we're going to wind up here. We figure by about the end of February, we'll have touched most of the places that we need to, and then the rest of the hard work will be getting the data together and beginning to form this report with its recommendations.

And the direct testimony, there's been some very interesting experiences in the town hall format. We've held that at Fort Hood and San Diego. I missed that part of it. I was there for the first part but missed the town hall for San Diego.

Then we had a town hall in San Francisco that was very good.

We've obviously found that the more you

publicize this thing, particularly in cities like San Diego and San Francisco, the more, the more attendance there is.

And we did publicize it at Fort Hood, and there didn't seem to be quite the same interest.

So we met in personal vignettes and we've met and we've gotten representation from special interest groups, and we've got more of them lined up to include groups like Veterans of Foreign Wars, Iraq War Veterans, MOAA (Military Officers Association of America), et cetera, a whole host we're lining up. And then people can submit on a website testimonies if they want.

So we're using every and all means that we can to garner information.

We've also taken briefings from these groups at the installations that we visit.

We have some DoD-level briefings coming up in, in December in Washington, D.C. to include Army National Guard, Army Reserve, we've got TRICARE coming to talk to us about TRICARE support

in mental health and then veterans and military support.

Inside our deep, dark secret executive sessions, we've had some interesting discussions, first defining mental health, looking at a vision for military mental health, and then we've had some discussion about defining the scope of mental health for the military.

First, I think folks were focused on the active duty issues, some of that revolving around PTSD (Post-Traumatic Stress Disorder) and PDHAs (Post-Deployment Health Assessment) and PDHRAs (Post-Deployment Health Reassessment). But I think we've expanded it to begin to address also issues of public health and mental health issues and also family members' concerns, the issues and challenges of family members.

Then we'll begin the hard work. We're getting close to a first draft. We've said, "Look, let's get some stuff down on paper so we can start to track on that," and Tom is working those. We should be looking at a first draft of

that report, really still pending, you know, observations and recommendations and backup data that we haven't placed in there yet. And then these are just some more of the briefings that we want to -- again, referencing some of the family members' issues, child and adolescent health support.

The MHAT teams are mental health advisory teams that have actually deployed into Iraq and Afghanistan by request of the MNF-I (Multi-National Force-Iraq) Command, General Casey. I mean, we've had four go in, three have come back and they are in the process -- two already have released their report. Done one every year. And that three is back. It's getting ready to release its report up through DoD. It's been through the Army. These are Army teams. And MHAT-IV is also back, and it's starting to work its way through the briefing cycles.

And this is really about going into the theater, talking to the soldiers, giving them surveys both as individuals and as groups, collating that data and beginning to look at things like stress, anxiety, PTSD, and whether a

soldier's answered yes or no to those symptoms, complexes.

So as I said, we're going to have a couple meetings. We predicted the February, March, April time frame we'll be doing the hard work of preparing the report.

We're still committed to a readout through DoD and then over to Congress in the May time frame.

Senator Boxer met with us in San Diego for about an hour. We had a very good meeting with her.

Her intent was to give the task force her and the Congress' intent of this task force. And it was a very productive meeting and open dialogue.

And subsequent to that, I heard again from her personally that she was just very, very pleased with the way the task force was going and they really have done a great job.

So you can see the final actions are analyze our findings and develop and then begin

the process of briefing, most likely starting with this group and then moving up, moving up to SECDEF (Secretary of Defense) or whoever else at the senior levels wants to hear it.

And, frankly, that's about it. I will say, I don't want this in writing, but I'll say some of the discussions that we're having now and looking at some of the issues are, as you would expect, access to health care, issues of stigma associated with seeking health care and is that an issue and what kind of recommendations are we going to make for that, even the issues of concerns about security clearances, et cetera.

So we're looking at all that. We're looking at the issues associated with the confluence or lack of confluence depending on the circumstances of disparate mental health agencies on an installation and the surrounding community and also some differences between services in terms of the amount of mental health services that are available and provided and how that's coordinated, for example, in the Hawaii Island

network, how are the three services -- or four services, depending -- except, of course, the Navy cares for the Marines.

No stunning revelations. No, "Oh, my gosh, we didn't know this. Holy mackerel, wait till they hear about this." None of that.

We've got a couple interesting places to go, frankly. I think we're looking forward to going, I know I am, to Fort Carson because there have been some issues out there.

I'm looking forward to the briefings by military veterans groups that want to come forward and talk to us that feel like they have to, they have to carry a message, and I'm very interested in what they'll have to say and in some open dialogue.

We continue to be very interested in the town hall meetings.

So I guess my bottom line to you is the group is doing a very good job. They are well-supported, well-resourced. We're not lacking for anything other than enough hours in a day and

days in a week.

And we've got everybody that initially signed up is still on board and working with us, and I think, I think we're in good shape so far.

So subject to your questions, frankly that fulfills the administrative requirement to come down and give you an update, but I'll be happy to take on any questions or make notes, frankly, if you'd like me to look at something that comes to your mind.

DR. POLAND: Thank you, General Kiley. The Board appreciates the regular updates and briefs you all have provided.

I do have a couple of questions. One, is there the opportunity when the site visits are done for the Board members to hear from service family members?

GENERAL KILEY: Absolutely. It took us a little bit of time to break the code of how to describe what we were doing.

Our executive sessions are closed, then we've had open sessions with invited speakers, and

then we've had these town hall sessions.

In the town hall sessions, we've clearly had a whole host of family members come up.

I can remember we had a mother come up who said her son who had been a dependent son with significant autism had been a real challenge for the family and for the mental health community to support them.

We had a very moving presentation by a mother of a young soldier who had done a year in Iraq, was back at Benning and proceeded to kill himself simply by putting a gun to his head. And she was very composed in telling this and talked, talked lovingly about her son, you know, just other than the fact that suicide may or may not be a piece of this whole mental health, and are we addressing this.

We've had individuals get up and give their personal testimonies and soldiers that have been injured in combat.

We had one guy in San Francisco who is a Vietnam veteran still working his way through

PTSD, et cetera.

So yes, it has been wide open. In fact, we run out of testimony before we run out of time. In Fort Hood, we were supposed to close the session, and a policeman who had -- a policeman from Killeen who was a nurse with the, one of our combat support hospitals wanted to testify. So we kept the open session open for a while. He got there and talked to us for a while and gave us some very good feedback.

So there's no limit and we'll stay around till everybody else goes home.

DR. POLAND: My second question is will the level of evaluation be able to look at possible sort of dose-effect relationships?

In other words, it's one thing and there's a set of issues surrounding, say, a single deployment, perhaps another set of issues around being deployed four or five times.

Are you -- is there enough material, so to speak, to be able to look at that level?

GENERAL KILEY: Yeah, I think there's

tons of it, frankly, most of it coming out from the MHATs which we'll have incorporated into our report.

But the data is very clear that the level of stress goes up understandably with repetitive deployments.

And so when you talk to -- and now our MHATs have started to look at -- and this MHAT-III will show us again that multiple deployers have a slightly higher incidence of anxiety, depression, PTSD types than single deployers, but they all have stress to some extent, as you might expect.

So yes, there's getting to be a large body of knowledge focused on the soldiers in theater in this MHAT process.

Of course, Dr. Hoge has done a different kind of study.

That's frankly been part of the confusing piece about this, particularly for the lay public and the press as they attempt to cobble together a piece about mental health and, you know, what's the military doing about it.

Chuck Hoge looked at anonymous surveys designated by a unit.

So the First Brigade of the 82nd Airborne at this date time group, as they say, filled out a survey anonymously. And they asked, you know, "Were you depressed? Were you angry? Were you using alcohol?" and they got some numbers.

And then they followed the First Brigade of the 82nd Airborne every 6 months for 18 months, 24 months, and they go back to the First Brigade, they hand out anonymous surveys, and they survey them again.

Well, it may or may not be the same soldiers. The MHAT, the MHAT has done it by name and social security and then the PDHA and PDHRA, the post-deployment screens which are much less detailed than either Hoge's review or the MHAT teams, and there have been a couple different lead persons: Ed Crandall led MHAT-III and Colonel Castro has MHAT-IV, Virgil Patterson had I and II, but their questionnaires are much more specific

and much more detailed.

And it's our intent to have all that data in this as part of that to kind of roll that up.

DR. SHAMOO: Dr. Shamoo. Are you going to look at the extent of training for the medical personnel -- and I don't mean psychologists and psychiatrists only -- overall to their early contact with the enlisted man and whether that's affecting how one looks at the mental illness?

Because that's when they are going to come in contact.

And medical schools, with all due respect to them, and I have taught in medical school for 35 years, it's not sufficient, and a lot of them who become nonpsychiatrists or nonpsychologists, they have very little training and education in how to deal with issues of mental illness. And I'm talking from very extensive experience in dealing with mental illness, and I'm not a psychologist or a psychiatrist.

GENERAL KILEY: That's a very, very good

question. There's about four, five different answers, all of which point toward the final answer, yes.

There are at almost every level an increasing awareness that we have got to get ahead on mental illness and mental wellness, frankly.

There are strategies in dealing with soldiers before they deploy in terms of better instruction in how to recognize and prevent, quote unquote, suicide and suicide prevention.

There are, there's a course we have just, we're just about to launch at Fort Sam Houston that they're all the mental health providers. And we had at one time more than 200 over in theater. But we give them a one-week intense course on how to do what they're supposed to do in theater in terms of reducing stress and managing PTSD symptoms in troops.

On the clinical health care side, we're doing a couple of things.

At Tripler, we're just about to put mental health specialists in our primary care base

so that they can do a couple things. They can educate primary care providers as well as becoming access portal for soldiers and family members to directly access.

We've got a project that a guy by the name of Chuck Engle out of Walter Reed has been doing with Duke University. He calls it respect.mil, and he ran a pilot at Fort Bragg where he took a large group of primary care providers, physicians assistants and family practitioners in the community of Fort Bragg and gave them extensive training in the diagnosis and the therapy of specifically PTSD presumably to address the issue that most soldiers, 90 percent of the soldiers will access their primary health care provider, i.e, sick call, go see their doctor or their PA (Physician’s Assistant). Rarely will they go to the mental health unless they are really pressed or directed to do that.

So what we're attempting to do and we're in the process of implementing this all across the Army and Chuck is coming to talk to the task force

in two weeks, is implement this across all the Army bases which really empowers primary care providers to not just make the diagnosis but to begin to treat.

The next thing is, and I just got an e-mail from my good friend Dave Orman, my consultant, who said we're not doing a very good job inside of our residency training programs, even in psychiatry we're not doing enough training about PTSD, how to recognize it, how to treat it across the broad spectrum.

So, I mean, I think -- I have not had this discussion with the task force, to be honest with you.

But as you see, I'm using this task force, frankly, as a vehicle to kind of leverage a lot of this not punitively but supportively that we can really start to step forward and say to the soldier -- because we know this. The Third Infantry Division is going back for its third one-year rotation, and that's hard duty. They're still signing on, but that's hard duty on them and

it's hard duty on their families, and we need to stay ahead of this thing.

And, I mean, I think, frankly, and this is, again, this is not task force, this is just me talking, I think we need to worry about suicide. We need to worry about whether we're missing something.

You can, you can talk about the diagnosis, you can do psychological autopsies, you can say that, yeah, our Army suicides are young, white males. In home base, it's often alcohol-related, it's usually related to relationship problems and/or disciplinary problems. Of course, in theater they are all walking around with a loaded weapon. And so they are getting e-mails every day from their spouses, their friends, sometimes girlfriends and boyfriends, and sometimes from their friend who says, "Hey, I just saw your..." you can fill in the rest, and they go right on to the...

So one end of the spectrum is suicide and the other is what are we training our combat

medics, the 68 whiskeys, what are we training our LVNs (Licensed Vocational Nurses) and nurses?

And I think we're in the process of beginning a full court precedence, because down the road having talked to the VA, at the risk of taking too much time here, they are under the impression, we don't disagree, that it takes a while to start to see the fallout of the stress, labor, PTSD or whatever after deployments and after combat operations. And so you may be looking at a bow wave coming at us over the next couple of years.

And the VA has got representation on the task force, and they clearly have got an issue coming at them, too.

DR. BLAZER: Dan Blazer. I'm a member of the task force as well.

Colonel Kiley -- General Kiley, excuse me, is certainly reviewed very well. And I think the task force actually faces three, probably more, but at least three major challenges. I think number one is that this task force has done

an incredible amount of work and we literally are drowning in data right now.

Coming out of that data with meaningful and fairly specific and probably somewhat limited recommendations will be a challenge.

We have, I think we will have the data. As General Kiley said, there isn't going to be any surprises in this at all, and I don't think anything that could come up later would be a surprise as well.

Second thing is that this is receiving increased attention in the media.

And whatever comes out of this task force I'm sure is going to be paid attention to. There's an NPR (National Public Radio) series running just this week on mental health issues in the military. And we're not writing this report for the media, obviously, but on the other hand, this is something that many, many eyes are paying attention to.

And the third which I've kind of had concern about and I think will continue to be a challenge all the way through is that these

disorders, as General Kiley said right at the end, go on for a long time, so that even though there's a divide between active duty and the VA in terms of these soldiers, there is no divide.

GENERAL KILEY: Right.

DR. BLAZER: This goes on for them. And trying to effect a way that they can receive some type of care that's probably going to go on for the ones who have the most chronic conditions for years is going to be a very good challenge.

I think Mark is going to show you some data later.

They are already beginning to experience a load of these individuals that they are going to be looking at for a long, long time. So I think we need to keep that in mind.

GENERAL KILEY: I absolutely agree with everything you said. And I think the task force is -- I think we recognize that, too.

Frankly, the only other thing I could say about all this is my sense that Congress is just standing ready and poised to provide us --

and by us, I mean, the Executive Branch, including DoD and the VA -- whatever they want and not necessarily at the expense of something else, too.

So I'm hoping that we're going to have specific, not too limited recommendations that will really maybe change the way we actually address this issue nationally from a public health perspective as well as recognizing that this is going to be a long haul.

If we're out of Iraq in the next six months or 18 months, it will be years and years.

And I do think that we're, we're light years ahead of where we were coming out of Vietnam. I think there's fair recognition of that.

I think the VA is, Mike Christman and Jerry Cross, the leadership over there, are leaning far forward, just kind of waiting for us to tell them what they need to do.

They've already identified PTSD clinics and they've got some magnificent work going on in a couple of the VAs.

DR. POLAND: One more comment from Russ and then Miss Embrey and then we will close.

DR. LUEPKER: Russell Luepker. I'm impressed with the thoughtfulness and extent of what you're collecting. Just one question. Are you collecting events? For example, do you know the prevalence of suicide, acute hospitalization for psychiatric illnesses? What is the magnitude of the problem?

GENERAL KILEY: We have that data in the Army, Navy, Air Force and Marines. We have a lot of the data.

The task force has not sat down quite yet and said, "Okay. What's the data point for suicides in young males?"

We know that's one of the issues. The task force is -- from my view, they don't need to do that work. That work's already been done. We can give you death rates, suicide rates per hundred thousand by services in Iraq, back in the United States. That's all public data, frankly.

So I'm sure as we address this issue of

suicide, there will be a call for that data, but that's very simple to get. That's not a problem.

In terms of admissions to psychiatric hospitals, discharges from the service for psychiatric... we can get all that, too. That's all recorded and annotated.

So the task force doesn't need to do the work other than simply ask the question, and in very short order we'll have that.

And we are very sensitive to backing up anything and everything we say with data as best as we can because there's a tendency, as you all well know, to be so struck by an episode or an issue, that you really want to make that a finding and then try to extrapolate, and if there is not data to support it, it's -- it can be problematic.

MS. EMBREY: General Kiley, I just wanted to thank you publicly for the work that you've done for the Army in this area since you took leadership in the Army as a Surgeon General.

I think that you would not say so, but you have done a lot to reset the warriors' mind as

they return. You've set up very innovative programs for the force. And I know it's going to be hard for you to be objective about that as you chair the task force, but you deserve a lot of credit for that, and I thank you.

GENERAL KILEY: Well, thank you. That's nice for you to say.

(Applause)

GENERAL KILEY: That's very kind. But, you know, I just mentioned some of the great people on the task force that are working. And, you know, the Army's not alone.

I do think we're in the face of the sea change, and that's what I'm frankly most excited about and was extremely excited when Bill Winkenwerder asked me to chair this thing. It's got me generating some frequent flyer miles, but it's well worth it.

I'll end with this anecdote that's been driving this.

When I was in Europe many years ago as a surgeon over there, we were working our way

through force structure environment. And the Army has these teams called combat stress control teams made up of psychiatrists, psychologists, occupational therapists and a list of technicians, and we've got a ton of them in Iraq now, three hots and a cot, back into battle and you're going to be okay, and it's really done marvels.

But back in the '97 time frame we were trying to convince the senior leader, long since retired, you don't know him, and we were showing him force structure and said, "And we need this 22-man combat stress control team."

This General looked at me -- I was a one-star at the time -- he looked at me and he said, "General, I don't need a combat stress control team. I'm just going to train my troops so they are battle-hardened and ready to go. They won't need any mental health."

And I looked at him, and I didn't have anything to say. What part of the body of knowledge do we understand about the soldier's heart and combat stress, shellshock don't you

understand? It was just flabbergasting to me.

We have come a long way from that point. We've got generals now that want to lead from the front of this.

We've done some post-deployment screening where we've sent the battalion commander in first to talk to the mental health counselors as part of the demobilization process, and then everybody else follows in right behind them.

So I don't have the time to go through a lot of these things that are not necessarily part of the task force except for briefing.

But I think there's a lot of change coming, and I'm just honored to be part of this real exciting time, and I appreciate the time of the Board here.

Let me come down and talk to you for a couple of minutes and say thank you.

DR. POLAND: Thank you, General Kiley. We'll take a ten-minute break now.

(Applause)

(Recess)

DR. POLAND: Okay. Our next speaker this afternoon is Lieutenant Colonel Hachey from the Office for Force Health Protection and Readiness, Policies and Programs. He'll provide a brief on DoD's pandemic influenza preparedness.

Saw you yesterday. Good to see you again today.

LIEUTENANT COLONEL HACHEY: Thank you for continuing these ongoing briefings. Since it's only been about a month and a half since the last briefing, this briefing will be brief.

The agenda for my briefing will start out with this is an overview of what the current disease status is, what the progress in the national pandemic strategy implementation plan taskings are, an appropriately small slide describing budget, antivirals, vaccine and probably the newest news is some recent develops with our Watchboard.

As far as H5N1 status, as of 29 November, there have been 256 cases with 154 deaths, and Indonesia continues to be the hot spot

with now 55 cases and 45 deaths this year.

With the Department of State in the lead, there is an international effort with substantial DoD input and engagement as far as fixing this particular hotbed of avian influenza.

Since actually both the last briefing, the briefing before, there's been really no significant change in the epidemiology.

Clade 2 still is the predominant clade. Clusters are continuing to occur. Again, they are a little larger than they were a year ago, but no significant increase over the past six to nine months.

The age distribution is unchanged. And there's no evidence of significant mutation. The next three slides were actually blatantly stolen from the WHO (World Health Organization). The first one describes the age distribution.

As you can see, it's still primarily the youngsters who are getting avian influenza, and it's uncertain whether this represents an age or exposure-dependent risk factor.

The next chart illustrates the onset of symptoms and hospitalization as far as the timeline.

And, again, you can see that a good share of the folks are presenting beyond the recommended optimal window for antiviral therapy. So fairly late in the course.

And the last chart depicts the onset of symptoms and death, with death occurring for the most part again about a week out after the onset of disease.

And the cause for disease still remains primarily an ARDS kind of picture.

The next slide depicts our DoD tasks and the national implementation plan.

Now, DoD has about 114 total tasks which represents about a third of all the tasks in the national implementation plan. Of that, DoD's in the lead for 31 and is supporting in 83.

Health Affairs has the lion's share of these tasks with 73 of which 20 were in the lead and 53 in support.

It's nice that we are on schedule for all of our DoD lead tasks. We've met all of our six-month suspense taskings and we're on track with the 18-month suspense taskings.

We are also fully integrated in the interagency process as far as other significant tasks in that implementation plan.

And three, just as an example, are national antiviral prioritization list or strategy, a vaccine prioritization strategy and risk communication, both platforms and materials.

The overall DoD strategy continues to be one of a layered approach, combining social distancing which is tailored to local requirements, infection control, pharmacologic measures to include vaccine and antivirals, all reinforced with a robust communication plan targeted both at providers and beneficiaries.

Now, I'm not Lizzie Borden. You can't get blood from a stone, which leads us to some budgetary issues.

There is no supplemental funding for

next year, and at this point in time limited funding for the FY08-09 time schedule.

This will probably limit our, our more robust goals as far as pandemic planning but has not put them to a halt.

This leads us to antivirals. Just as in the national implementation plan, Tamiflu does remain the, both the primary and the drug of choice for the treatment of a potential pandemic.

As far as the DoD stockpile, we now have 2.6 million treatment courses in our larger stockpile that, as you remember, is divided into three geographic areas.

We're also establishing an additional 470,000 treatment courses that are going to be placed at the MTFs (Military Treatment Facilities) which represents about 10% of the population at risk.

Following the delivery of all of our ordered Tamiflu, the larger DoD stockpile will have about almost 3 million treatment courses available for either prophylaxis or for treatment.

We've revised our Tamiflu release

policy, and this includes a post-exposure strategy.

Also has a use matrix based on variable disease severity and supply.

And if the layered approach is, in fact, successful, which the modeling suggests that they might be, this may provide more antivirals for use in community containment measures.

The vaccine, we currently hold 1.7 million doses of Clade 1 Vietnamese 1203 vaccine. Of that, 103 million have been bottled.

The good news is the previous vaccine degradation rate that was somewhat concerning about six months ago has stabilized and that 1.7 million doses appear to be remaining constant at least at this point in time.

Some significant unknowns are the amount available to DoD from the current and future vaccine production lots, and those negotiations are ongoing. Also, given funding limitations, just how much vaccine we'll be able to buy.

We are conducting a risk analysis

through modeling to determine the potential impact on DoD with variable vaccine effectiveness and vaccine penetrants within the DoD community.

The last issue is communication. The MHS (Military Health System) Watchboard is transitioning now to the official DoD site, and this will incorporate nonmedical DoD activities as well as the previous MHS content.

The address is listed here which hasn't changed but the access has. It is now open access.

And it now has a direct link to and from pandemicflu.gov. --

MS. EMBREY: Could you go backward again? We're writing it down.

DR. POLAND: The Web address.

MS. EMBREY: There you go.

DR. POLAND: Thank you.

LIEUTENANT COLONEL HACHEY: Okay. So, again, we now are directly linked with pandemicflu.gov both to and from. We're expanding our risk communication libraries. This includes

Web access for beneficiaries, but probably more importantly, access to risk communication libraries for the providers to download and modify to suit to their local requirements.

It also has a provider link which includes clinical guidelines, policy and guidance and will be a format that we can change the guidance with recent developments and clinical knowledge.

Future content will include a question and answer library that will be expanded and also the ability for beneficiaries to post questions.

And targeted a little later is a PHEO's (Public Health Emergency Officer) corner which will have PHEO specific information and a forum for them to interact.

MS. EMBREY: You might want to tell them what a PHEO is.

LIEUTENANT COLONEL HACHEY: Public Health Emergency Officer.

The last series of slides just gives you an idea of what the Watchboard looks like now.

So people can either click on here for

service members, there for health care planners or providers, here for a menu that is more specific for DoD leadership. You can also get there also by just clicking on these areas, or if you don't like those, you can use menu at the top.

So almost no matter where you put your mouse on this sheet, you'll get to the area that you want.

This is what the service members and civilians and family I guess home page looks like. It includes fact sheets, tri-folds and fliers that are available, and this will be expanding as we develop more materials and organizations submit their, their materials to the, to the Watchboard.

This is the home page for health care planners and providers. Here they can again access DoD policies and guidelines, communications and outreach programs, DoD plans, H5 laboratory testing sites, disease reporting and notification requirements, find out what's happening with avian flu through WHO websites and response and containment measures.

As far as DoD leadership, again, links to agencies like MILVAX (Military Vaccine Agency), NORTHCOM (Northern Command), PACOM (Pacific Command). The Department of Defense education activity also has a pandemic flu website giving guidance to their population, both educators and their end users.

If you're interested in a history of the Watchboard, that's also there.

Frequently asked questions. And a glossary of terms for folks to refer to. And I did promise I'd be brief.

DR. POLAND: Okay. We're sort of packed at the edges here.

DR. LEDNAR: Wayne Lednar. Thank you for that update on the virology and the positioning of antivirals. The question I have is one of what are we, what are we thinking about when this happens in terms of health care delivery, operations and continuity of being able to do that. And I'm wondering if DoD has run a scenario for its health care delivery, anticipating issues of a 30 percent absenteeism,

that government health authorities have closed the DoD schools and the daycare centers on post, to the extent that you have many single parent families, what's going to be the response for that service member being able to get to work or sick, getting care and care for their family.

So I'm wondering how some of this is turning into plans for action in terms of health care operational continuity.

LIEUTENANT COLONEL HACHEY: Actually, we're on our way and almost there in some areas.

For example, the Office of Personnel Management does have a pandemic flu plan that does include issues like dual training, telecommuting, what are they going to do with a significant decrease in absentee -- significant increase in absenteeism.

There has been a number of local commands that have started exercising, and I believe the target date is April of this year. There's a DoD level exercise looking at what the impact of that significant absenteeism rate will

have on DoD operations.

DR. LEDNAR: One aspect of experience I'd share is how our information technology experts have looked at it is we've often heard about how telecommuting and sort of working virtually is a way to work.

Our assessment is that to the extent that you require significant broadband capability, the ability to use telecommuting is very much exaggerated as a way to continue operating effectively.

So if anyone's got a great sense of relief, this is going to do it. Even if we could get enough laptops and connections, probably not going to be the case in practice.

MS. EMBREY: This is Ellen Embrey. I think the joint staff wants to make a comment, but I want you to know that inside the Department, we were specifically very concerned about what to tell the personnel, the military and the civilian personnel community across the Department about working from home and actually exercising that.

And there's going to be an exercise within the next two months internal to the OSD staff, the very senior levels of the Department, to see a no-notice -- you know, during a week, 30 percent of the people will be told stay home and work from home and see how it works.

So we are exercising that and we'll be able to report back on how well that works, and we anticipate the same issue that you just mentioned.

DR. POLAND: Would you mind just saying your name and a brief introduction so we can capture it.

DR. WALKER: David Walker from the University of Texas Medical Branch.

DR. POLAND: Thank you. Welcome. Okay.

DR. KAPLAN: Ed Kaplan. You said you have a budgetary limit of $100 million for the next year. What would you do different if you had a budget that doubled like that? In other words, how would you move ahead differently than you're being -- than you're having to do at the present time?

I think the Board would be interested in what we could do to further this if we had a printing press in the basement.

LIEUTENANT COLONEL HACHEY: Now, the important caveat is what would I do as opposed to what would DoD do.

DR. KAPLAN: What could be done, how about that?

LIEUTENANT COLONEL HACHEY: I think some options, one would be to procure more vaccine if it was available.

The supply capacity or the production capacity is probably a great limiting step right now.

But in projecting further down the road as capacity increases, then getting more pre-pandemic vaccine at least to use as a, either a partial protection or a good primer would be one area where the, where money could be spent.

Increasing our surveillance capabilities, having more local diagnostic capabilities with PCR.

Another example -- another place where we could spend more money is more antivirals so we could really center in on community containment as well as preserving operational effectiveness.

DR. KAPLAN: So that would be your wish list, to coin a term?

LIEUTENANT COLONEL HACHEY: That would be my wish list.

DR. KAPLAN: Thank you.

DR. POLAND: Dr. Smith, did you want to make comments?

MAJOR SMITH: Sir, this is Randy Smith. Also, truth in advertising, I'm not a doctor.

DR. POLAND: I apologize.

MAJOR SMITH: I didn't want to claim credit for something I didn't have.

But to answer your question, sir, earlier to supplement what Colonel Hachey had said, there's extensive planning efforts underway. I believe I briefed two AFEB meetings ago on this particular issue. There is a Department of Defense signed pandemic influenza plan that was

signed in August, and there are five geographical combatant commands, COM plans that contain the operational details of how to respond to a pandemic event.

There's been a lot of activity in this area, and there's been a series of tabletop exercises and a series of theater engagement activities from the geographical combatant commands: NORTHCOM, EUCOM (European Command), PACOM and to a degree CENTCOM (Central Command) have done tabletop exercises on this to date.

We've also done something, and I don't want to obligate Commander Batsel, but I do know that US Northern Command has been appointed as the global synchronizer of this pandemic planning activity.

So to answer your question, sir, about the plans and operational side of the house, there has been a lot of activity on this. There's a lot occurring at the combatant command level. And the theater combatant commands also have a great deal of interest in theater engagement and training and

exercising to supplement the prophylaxis and the vaccine purchases if money does become available.

Thank you.

DR. POLAND: Thank you.

COLONEL ERICKSON: Colonel Loren Erickson. I just want to make a couple comments for consideration by the Board. You know, respectfully submitted, a lot of the national plans right now are very vaccine-centric. The lessons learned from beating back SARS (Severe Acute Respiratory Syndrome) was that, in fact, we didn't have antivirals in a big stockpile, and we didn't -- in fact, we didn't have diagnostics early on. But we didn't have a vaccine. And yet, you know, bread and butter public health officials using the standard methodologies of surveillance, early detection, isolation of cases, quarantine, home quarantine, closing of schools, et cetera, was highly effective.

Right now we've got a lot of vaccine for a clade that is no longer circulating. And, you know, to me that's an issue.

So I will tell you that some of our current activities of surveillance were started with FY06 money, and without an FY07 appropriation, we're having to put a certain number of things in sort of a slow burn.

And I encourage the Board to consider perhaps making some recommendations as relates to prioritization of where the money should go, because I think that there's a certain tunnel vision right now that just looks at a vaccine.

DR. POLAND: All right.

COMMANDER BATSEL: Commander Batsel from NORTHCOM.

I'd like to reiterate the importance of looking at pandemic influenza as an environment that encompasses so much more than medical. So that if we use our resources only for medical purposes up front, we still remain unprepared.

We need to consider the planning across agencies, across geographical regions and throughout the DoD, and for that, significant funds are required.

We're looking at potential impacts on our government continuity, on the continuity of other governments in other countries. And globally the impact is enormous.

So if we're looking at just stockpiling, we're going down the wrong trail, in my opinion.

DR. POLAND: Mike?

DR. OXMAN: Mike Oxman. Medical personnel are going to be primary targets in short supply. And can you mention what plans are for prophylaxis for Tamiflu prophylaxis at this point for medical personnel?

LIEUTENANT COLONEL HACHEY: With the new and revised antiviral release policy or strategy, in that matrix it does have a niche for health care providers who are actually providing direct patient care to patients who are likely to expose them that they should be considered at least for either operational prophylaxis or post-exposure prophylaxis or post-exposure treatment.

So that they are included in the, in the matrix.

What we don't know is how much, how much antivirals we're actually going to need.

Will the current dosing recommendations still hold or will people act like mice and you have to double it?

So hopefully we'll continue backup, and the current dose will be more than, more than suitable.

But we don't know that. We don't know what the attack rate's going to be.

So if we want to at least be able to treat those who are ill with disease, that will provide less for prophylaxis and if our operational requirements are greater as far as protecting those folks who are on the front line and exposed to virus.

So there are a number of moving parts as far as who actually will get how much antivirals.

But in our prioritization matrix, health care workers again in that particular niche are high on the list.

DR. POLAND: Any other comments? Okay.

Thank you. I'll make -- this is Dr. Poland. I'll make a few comments on behalf of the select subcommittee. We have continued to be busy. We met for a day yesterday in Washington, D.C. and invited the various manufacturers to come and brief us on where they were with their research and development efforts so that we had a better understanding of what was happening on the vaccine side of things, by way of background, some sort of fill-in things to what Wayne said.

It is interesting to me that a lot of people sort of get their sense of the importance of this by their recollection of media reports. And the media, of course, is on to other things. But the pace of deaths is happening about double what it was last year.

The virus is an estimated one or two amino acid mutations away from being able to attach from animal, that is, two six to two three, human receptors. We've begun to see some isolated resistance to Tamiflu with certain strains of H5N1.

It takes about one amino acid mutation for that resistance to occur.

So there's a lot still happening and a lot of knowledge yet to learn about the virus.

The Board has previously written recommendations on the research needs that need to occur, we've written recommendations on the use of mask generally defined, and we have written some recommendations on the use of vaccine in particular, sort of a hold policy on the Clade 1, 1203 vaccine that's available.

There haven't really been any documented Clade 1 infections in the last six months or so. Maybe a little longer now.

So this is a moving target, a very dynamic environment, lots of evolving Clades and quasi species of this virus, and it's unclear what will happen other than the need for vigilance and preparedness.

The one other thing I might say, we have been, of course, keeping our eye on H5N1, but H7, H9, even H2 are also viruses that could

potentially be pandemic.

So what I can summarize from what we heard yesterday is there are a variety of different vaccine approaches. I counted looking at live versus inactivated versus whole, versus split and various adjuvants, at least ten or more approaches being vigorously approved. All of them have timelines.

I don't think the timeline is confidential information, was it?

All of them have time --

COLONEL GIBSON: No.

DR. POLAND: Okay. Let me just make a general statement that all of them are timelines that are going to be, you know, three to five or more years out in terms of an approved vaccine.

So it's a very difficult area of uncertainty in terms of what do you buy, what do you stockpile, et cetera.

It's a little more complicated than SARS was in the sense of with SARS, you have the advantage of a very long incubation period where

you could quarantine people, and that was the successful -- in fact, the only thing that one was able to bring.

Not so with influenza and particularly pandemic influenza.

However, it is clear that there were communities in 1918 that took preparedness and, let me just broadly call them, community mitigation efforts very seriously and communities that did not had very different morbidity and mortality experiences, and that data is still being collected and analyzed and published.

So subject to any questions people have about what the select subcommittee has done, that's really all I was going to say, unless any of the other subcommittee members have anything they want to add.

Mike?

DR. OXMAN: Mike Oxman. I'd like to speak for myself, and I think the data has accumulated to make it clear that the vaccine that we purchased is not going to be effective, is not

likely to be effective against a pandemic flu that's likely to occur and isn't going to be useful for priming.

On the other hand, the live attenuated vaccine FluMist has -- and I have no stock in any of these companies -- looks like, first of all, it offers promise and, secondly, that it could be ramped up for production if we could get rid of this enormous weight of pre-decided acquisition of split virus vaccine which is also what we heard yesterday. Most of HHS (Health and Human Services) money that's been committed to corporations, most of it has been for ramping up production capacity of split virus vaccine.

COLONEL GIBSON: This is Colonel Gibson. I do have to make a comment for the record.

The Defense Health Board is not in the procurement business and does not make recommendations on procuring specific brand name products.

DR. POLAND: Greg Poland. I might just add one thing. It was a late-breaker abstract

that was presented at IDSA on trainers' work where they had done an early trial with an H5N1 vaccine I believe it was in 1998, and they got one or two doses, and then this past year gave them a second or third dose. I can't remember what it was.

And indeed, though they were different Clade vaccines, found significant boost effect related to that.

So was somewhat unexpected. It was a small study presented at an abstract. But there is a lot to learn about this. I mean, I think anybody that has studied influenza would agree there's only one truth about influenza virus, it's inherently unpredictable.

Pierce, did you want --

DR. GARDNER: Pierce Gardner. On a slightly more positive note from listening to the various manufacturers, that they all seem to be making significant progress in ramping up.

So that we were hearing numbers like 50 million doses in a month could be produced and those kind of numbers in two to three years. So

that that's, that's not bad.

And I think that I do believe that we, our subcommittee probably needs to meet and make some recommendations along Mike's line, not necessarily name a brand, but to name a type of process that we think is going to be much more likely to be productive, and I think that came out of yesterday's meeting, myself. I think that we could be more specific in that regard.

I have another question with regard to the Tamiflu stocks which we now have in some numbers, that really reflects the idea what if we have a year of seasonal flu that's very -- where the vaccine is very poorly matched.

Are we willing to go and dip into that stock or are we saving it for the avian crisis only?

MS. EMBREY: This is Ellen Embrey. It depends, I think is the answer. I think that that will be a judgment at the time of the circumstance, and we'll make that judgment based on force protection requirements.

I wanted to comment on what the Department has done with your recommendations.

Specifically, there was a recommendation that we use a chaos theory model as a potential way to inform us for planning purposes.

And we have, in fact, investigated and are engaging in that and doing that.

With respect to your mask recommendations, we incorporated that in our strategy for acquiring different kinds of masks based on your recommendation.

We did not issue any formal policy yet, although we purchase along those lines primarily because we are working with HHS and wanted to make sure there was federal government unity on how we moved forward with that.

With respect to the vaccine, we bought what we bought in case something happened in the interim.

Our current strategy for vaccine is that we with the funding that's available, we would buy half again what we need each year and use the

previous year, so we'd have a mix of the old and the new.

And this year's vaccine is being produced against the Clade 2.

So what is available for us to purchase this month, next month and in March is actually based on the Clade 2.

So we will have, we'll still have the majority of Clade 1 available to us, but we will continuously each year, we have an annual strategy to buy vaccine each year of the latest Clade that is being produced by the manufacturers. So it's not just one, we're not just buying one, obviously.

Funding is an issue. It's an issue for the Department of Defense and for the federal government.

The President decided that he would not request a supplemental for the federal government because this is his program, and so he's directed each agency to find the money to do this.

So the Department is in the process of

finding the money to do it. They just haven't found it yet, but they are looking.

We are assured that it will be made available to us.

DR. POLAND: This is Dr. Poland. On behalf of the Board, we'll cut our salaries in half.

DR. OXMAN: And Dr. Silver is going to keep his wallet...

DR. POLAND: My last comment to make is on behalf of IDSA, Infectious Disease Society of America.

Last week I met with Vice-President Cheney's advisers and the director of biodefense policy and did have the opportunity, we don't lobby for DoD, but did have the opportunity to talk to them about some of the challenges, as I know have had -- discussions have occurred at much higher levels than myself.

But I think one of the recommendations from the Board, and I think it's important to say this, was that DoD, this was a recommendation six

months ago, be increasingly seen as a player at the table in these interagency talks, and that has begun to happen, though I think there's room for us to be further involved, and Wayne and others may want to make some comments on that.

But I think that message was also heard clearly and a lot of improvements have occurred in that domain.

Wayne, did you want to add to that?

LIEUTENANT COLONEL HACHEY: Actually, just a comment. Wayne Hachey.

I wanted to make a couple comments. One is that we heard that we have an overreliance on pharmaceuticals and vaccine.

In fact, DoD has a layered approach. In 1918 we clearly learned that public health measures help but they are not going to stop the pandemic.

The current modeling suggests that if you have public health measures layered with targeted pharmacologic measures, that then you may, in fact, drop the R-zero to a manageable

level where you can either blunt or in fact stop the pandemic.

And that is our approach, that it's a layered approach which includes antivirals and includes vaccine but also includes a strong emphasis on public health measures.

So I don't want the impression that we have somewhat of a tunnel vision as far as antiviral procurement. That is just part of that layered approach, and the same thing applies to the vaccine.

The other thing, the current vaccine, the 1203, might not be so bad.

I mean, if you use the hemoglutin and ambition data, then it does look like it's really a crappy vaccine.

But if you look at the ferret data --

MS. EMBREY: The furry animal.

LIEUTENANT COLONEL HACHEY: Looks like a weasel.

-- and survival is your end point, then this Clade 1 vaccine with the Clade 2 challenge

may actually not be such a bad vaccine.

So it really depends on that extrapolation from either HI (Hemagglutination Inhibition) data or from animal data and which one's going to be right, and I guess we won't know that until the H9 pandemic actually starts.

DR. POLAND: Please.

LIEUTENANT COLONEL HACHEY: The last thing is that DoD is fairly well-engaged at both the Joint Staff level, at Homeland Defense level and at Health Affairs with the interagency process on really multiple fronts.

That includes interactions with the State Department, particularly dealing with our international efforts and specifically with Indonesia as well as planning, again, vaccine prioritization, antiviral prioritizations, working with the Department of Transportation and so on.

So we are fairly -- not fairly, but we're well-embedded in the overall national planning efforts.

DR. POLAND: Thank you. Any other

comments? Okay. Our next speaker is Miss Embrey. And she's going to brief us with the latest information regarding the unified medical command.

So the floor is yours.

MS. EMBREY: If it's okay with you, I would like to just sit here. I prefer sitting.

I want to make sure everyone understands that this is not a joint or unified medical governance issue. It is a way ahead in terms of improving our efficiency, effectiveness and standardization and to improve unity of effort across the Military Health System.

Next slide. A year ago the Secretary of Defense issued a decision that said he wanted an implementation plan for achieving a Joint Medical Command for implementation in the FY08 to 12 program.

So over the -- since that time, there has been considerable effort within the Department to evaluate how a Joint Medical Command might be structured to achieve efficiencies in the system across the services and OSD.

There were several groups, senior leadership was engaged at all levels both at the OSD level, the Joint Staff level and in each of the services, and there was also a separate study done by the Defense Business Board which looked at it not necessarily from a clinical perspective but a pure economic perspective. If you want to be -- if you want to do this from a business perspective, this is how you should do it.

That was roundly rejected by many, and as a result, a different approach was taken.

P and R, which stands for Personnel and Readiness, which is the Under Secretary's office, Dr. Chu, and Dr. Winkenwerder, worked with the Surgeons General from various recommendations coming from several working groups, and it worked iteratively with each of the Surgeons General to come up with a concept or principles that could be applied to achieve efficiencies and unity of effort to posture us for success in the future.

Next slide. That concept was briefed to the Deputy Secretary about two weeks ago, and he

approved the concept. And what you see in this briefing is what was approved, but only in concept. The devil, of course, is in the details, and there is going to have to be a whole series of efforts to actually translate these concepts into organizational constructs that people can live with. So it won't be easy.

But the first, the first step is that the objective of this is to improve efficiencies, to reduce and eliminate redundancies where redundancy exists and can be accommodated without changing culture or anything else.

The second is to provide common functions, unity of effort across the system where it doesn't matter what service you're in.

There was a separate effort from this, this evaluation process to look at quadrennial defense review objectives to improve and to push down to the lowest operating level authority and flexibility for the local military treatment facilities to manage and become more efficient but using a common infrastructure, common standards,

common ways of doing business.

So this concept would support that infrastructure of standardization but allow for local flexibility.

This concept would have to preserve each service's ability to operate in their suit and to be unique culturally and be part of that service culture, but they would have to adapt to common standards, much like the discussion you had this morning, a common approach, if you will, for dealing with Group A streptococcus, is that... Okay, GAS. Hum. I thought that was a different definition.

Anyway, the other part of the concept that was approved, unity of command and unity of effort under joint operations. This was a very, very important principle, but it's very difficult to achieve that principle and achieve the principle of the bullet above it, which is to also preserve service unique culture.

So there will be, I think, a lot of dynamics as we move into the details of this

implementation between those bullets.

Unity of command under joint operations, which is an objective of the Department, and providing and preserving service unique culture. That will be the crux of our difficulties.

Facilitating consolidation of medical headquarters under BRAC (Base Realignment and Closure) law. Under the BRAC law, we're required to create a single joint medical headquarters for the Army, Navy, Air Force medical community. So all of the Surgeons General will be collocated in one place and operate with unity of effort.

So the bullet above that one supports that. The coming up with the unity of command and under joint operations is the outcome of having a consolidated headquarters. I don't think you're going to be able to get one without the other.

The next point, they wanted to have a joint environment in which to develop leaders so that they would have for the future unity of effort.

So this required a focus and attention

to joint training and education.

The last two concepts were added by the Under Secretary and the Assistant Secretary for Health Affairs who believed that there was still a requirement for them to oversee and manage the defense health program centrally from the Office of the Secretary of Defense.

So that did not change. And, lastly, what was agreed upon in these points was that this is a starting point for a future Joint Medical Command.

We aren't there yet. We could not get the agreement. And so we are doing what we can do which will prepare us for achieving that in the future.

Next slide. So what was decided? There will be a joint command in the National Capitol area region and in the San Antonio area, a single unified, you know, commander for all services that are functioning in that area coordinated in those two areas.

There will also be a joint command for

medical education and training in San Antonio.

There will also be joint commands for other multi-service markets planned for the future, but that's not been identified at this point.

They are going to accelerate the collocation of all the Surgeons General headquarters offices as required in law. Their objective is to try to get there by 2009 rather than later.

They did decide to combine all medical research and development under the Army Medical Research Materiel Command with Army as the executive function. They'll be in charge of it all and running it through the system.

This next point, the joint military health directorate, this is quite controversial. You will see that listed under this are what I would call the seed corn functions, if you will, of shared services necessary to have a unified medical command. Everyone needs to have a human capital structure that is uniform across the

services.

So accessing people in the same way, compensating them, incentivizing them in the same way through the system is quite important.

Same thing with recruit, same thing with budget and finance. Right now each service has separate ones.

So this joint military health directorate is actually an execution, a bringing together of these core capabilities that will facilitate efficiency and effectiveness across the system in core areas.

This is controversial and it will be very difficult to do. But the Deputy Secretary is the one that wants this one, so we're going to work on that.

Next, refocusing the TRICARE health plan on insurance, network and benefit and beneficiaries issues.

The TRICARE Management Agency right now exists and provides a wide variety of support services, and it's going to be refocused on health

-- the purchase care and health plan insurance, regulation and delivery.

So those are the things that were approved conceptually.

What remains unchanged is the Assistant Secretary of Defense for Health Affairs' responsibilities for centrally budgeting and overseeing its execution across the system, developing the health policies that apply to the MHS, looking at how the system should function and manage itself to achieve objectives developed jointly with the surgeons, how we communicate to our beneficiaries and to our customers and clients and Congress and any other stakeholder, that will also remain a Health Affairs responsibility primarily and developing a unified legislative strategy for the MHS is also being retained at the OSD (Office of the Secretary of Defense) level.

The Uniformed Services University remains an ASD(HA) (Assistant Secretary of Defense, Health Affairs) function. It had been being managed under the -- through the Navy. It was recently

reassigned to the ASD(HA), and it will be retained under the ASD(HA)'s authority under this realignment.

Next slide. As I said, the Deputy Secretary approved this conceptually. The Surgeons and the Joint Staff are going to have to be working together with the Assistant Secretary and the Under Secretary to make sure that we have final agreement on how the details of this realignment, if you will, will be executed.

And there's the timeline. Of import is the end state is to have a collocated medical headquarters in place by 2009, and by then we will have learned to perform with unity of effort, and hopefully by then we'll have figured out that it's not as hard as we thought and that we could move a little faster.

Next slide. That's all. Any questions? Good. Thank you.

(Applause)

DR. POLAND: Okay.

COLONEL GIBSON: One comment. Just one comment. This is Colonel Gibson.

As your role in the Defense Health Board, your mission has expanded markedly into the, into issues related to health care, health care delivery. So -- and this is a major, major shift change, a paradigm shift within the Department.

So please take these words that Miss Embrey provided, think about them, digest them because I am quite sure they will come back to you, and you're going to be asked for recommendations and other comments relative to these types of plans.

DR. LEDNAR: Wayne Lednar. I just share one little smidge of experience from one community. This is just a passing fleet compared to what the DoD challenge is.

But in a health system effort to try to come together, taking two separate health entities, the early efforts to use kind of the administrative back office procurement functions, purchase in a unified way to attain health savings did nothing to bring the cultures together. And

it wasn't until the clinical operations and the lead -- the leadership became a combined one that there was any real material effort towards being a single entity.

So while we can get some savings from some of the back-office procurement, that isn't really getting at the ultimate goal.

MS. EMBREY: I'll take that back. Thank you.

DR. POLAND: Okay.

DR. HALPERIN: Bill Halperin. I'm not -- it was valuable information. I'm not sure whether we're being asked for opinions. We're not. Good.

DR. POLAND: Well, maybe to clarify, there will be a task force that will be formed on the Future of DoD health care, and so we'll hear more about that, and that's the place where we'll give input.

DR. HALPERIN: In the future.

DR. POLAND: Yes.

DR. HALPERIN: Bill Halperin. When this

happens nothing like this can happen without considerations of pros and cons, obviously, and as it develops, it's good to be on the lookout for the cons that people might have predicted and, and also the pros that ought to be applauded.

And I was just going to suggest that in our future meetings, it might be valuable to have sort of a discussion of what those pros and cons are so we really are more informed about what we ought to be concerned about.

MS. EMBREY: As I told you in the background, we weren't asked if we wanted to do this; we were told by the Deputy to come up with a plan to do this. And I believe that the community has done, I think they've leaned as far forward as they can to agree to do what they believe will yield positive results in terms of efficiencies and effectiveness.

But like anything else, when you do something halfway, there's a pro and con to that.

So this may be what we can do, but it may not be what we want it to be. It could be a

lot better or could be a lot worse. And we may end up with a -- you know, learning as we go.

So you will be observers in this process. And I think with your experience and with your expanded mission, you will be having as a task, another subordinate task force in the future for military health care. That task force is being asked to evaluate how well we are doing what we are doing and if we are structured in a way that will actually improve our success for our future objectives. And you may find that our solution isn't optimum for that or you may not.

DR. SHAMOO: Adil Shamoo. Your presentation answered some of my concerns, previous concerns. It is a two-part question. At present, I preface it by saying at present what we do, we hear a presentation, we deal with one issue, and then we deal with another issue.

And I'm assuming that since this is much broader responsibility, we're going to deal with broader issues.

And two questions that come to mind is,

I would like to see, I don't know if that's in our purview, the overall mix of health protection picture and how anything we are considering each time we're considering new things, how that is going to impact the health, you know, force health protection picture.

So we keep moving those puzzles in some way that we are not disturbing, we do something well here but it is disturbing some other component by only talking about one issue, and who is going to keep track of that.

MS. EMBREY: As the deputy for Force Health Protection and Readiness, I guess that's my job, which is why I am so happy to be here, seriously.

On the other hand, the mission for the Department is more than just protection. It's delivering care and preparing to deliver that care anywhere in the world. It's got a heavy training burden and delivering care not only for and prepared for what we do for our fighting force but also for our beneficiaries, which gets us into

broad, general delivering care just like everybody else in the world.

So we've got some interesting challenges that makes us different, as you all know, and as you move forward with your broader scope, I think it would be instructive to agree upon a structured way to look at the Department and to look at its broad Military Health System objectives and then maybe have a way in which to look at the synergy between those components as we function, because it's all driven by a same top line.

And right now the Department exists, the Military Health System is funded primarily by the defense health program, but it does have a significant infusion of dollars from the services line.

And we've never had broad visibility of the full monty of resources as they are applied to the Department's Military Health System. And with the broader mission, I think that we might have a clarity on that.

DR. SHAMOO: Okay.

DR. POLAND: Mike?

DR. PARKINSON: Mike Parkinson. At the risk of being premature as everything old is new again, there was a group called the Council of Colonels, as we were called in '98, '99, that was charged by General Blank and then General Rodeman to create over two years what was called the Military Health System Optimization Plan which was written.

It was actually seen as a best practice model by Millbank and published by Millbank Foundation as a population-based needs assessment in eight critical steps that could be used today, I would posit, as a strategy to combine readiness in force health protection with highly effective and efficient health care delivery.

The theme that I see here a little bit -- and, again, it may be premature, but we're getting to the cocktail hour -- is this let's separate again the purchasing function of what we do in TRICARE, which is just kind of buying health insurance, versus what we do in the MHS, when

really where you're going here, what you're saying is no, there is a population needs assessment that has a readiness face to it and which has an evidence-based, highly effective, efficient delivery system to it. We can either make it or we can buy it.

But when we're running 25 million, billion, whatever it is, the red that we are running in the MHS, you can't be an accountable steward of government taxpaper money with saying it's okay to be inefficient on one side and to buy inefficiently on the other at the same time.

And the theme -- it's going to be interesting to follow this as it goes through, but at some time I'd like to know what was so onerous about the DBB (Defense Business Practice Implementation Board) approach that it was immediately rejected. That's an interesting data point.

But the other thing is there better be a close connection between the care we purchase and the care we deliver as a taxpayer, because I don't want to pay for care that's from Humana that I should be delivering right down the street in a

facility we saw today.

And so that balance is something that I understand from the Uniformed Services we want to basically keep somewhat distinct.

But there's a two-year project that was under then Secretary, Acting Secretary Ed Martin and others to say let's get the strategy right. The governance will follow. But what is the paradigm, what's the model you want to use to optimize the use of resources for outcomes. Then let's back up and say, "Okay. Now, do we govern that?" as opposed to who gets the boxes and who reports to whatever.

And that historical document ain't that old and the world hasn't changed that much.

And I might suggest in the process that get dusted off and looked at as a template, because a lot of good, thoughtful work, including Don Arthur who was then a colonel, wrote that thing.

DR. POLAND: Mike, you might have just bought yourself another committee assignment.

Thank you. I want to move on to Mark Brown, DHB's ex-officio member representing the Department of Health Affairs who is going to provide an update on OIF/OEF (Operation Iraqi Freedom/Operation Enduring Freedom) veteran VA health utilization. This, of course, has been an item of interest for the AFEB, and it will continue under the DHB.

DR. BROWN: Thanks for having me give this update on this report. I gave it once more about two years ago to the Board.

I should start off by saying I'm acutely aware of the responsibility of being the last speaker of the day and standing between all of us and that cocktail hour.

Greg asked me if I could finish in 30 seconds, so I'll do my best.

DR. POLAND: The slides, by the way, are on your tab 6.

DR. BROWN: Basically the Department of Veterans Affairs, we feel a responsibility every time the country goes to war to start monitoring the health of returning veterans. We just sort of

see it as part of doing business. We know we're going to get questions from veterans service organizations and from Congress and from the media about how veterans are doing, what kinds of health problems they have. We also have to do planning, internal planning to provide the right care, right mix of care, make sure that we have the specialties in place and so forth for any combat veterans that are returning. We've been doing this certainly since the Vietnam War and the 19 -- the current wars in Iraq and Afghanistan of course were no exception.

We produced this report -- let's see. How do I make this work. Here we go.

The report that I'm going to talk about is basically very simple. We take data provided to us by the Department of Defense. It is basically a roster of every single separated veteran, every single service member who served in Iraq or Afghan, in a current conflict, separated from military service and is therefore eligible for VA benefits. And we take that roster then and

tabulate it, and I'll talk about some of the results that we get from that.

And then we can match it up electronically with our own inpatient/outpatient data. All our inpatient/outpatient records are electronic now. And every time the patient or the veteran comes to VA for health care, they leave an electronic record that records what their diagnoses were, what their meds were and some other basic data, and by matching that up, we can tell you what types of health care issues, what kinds of diagnoses these veterans are receiving.

So conceptually it's very simple. It's taken us an enormous amount of work, like working with our counterparts in Army Defense, to try and get this data messaged into a format where this works.

And we work very closely with the Defense Manpower Data Center with -- if they weren't helping us, this would really be an impossible exercise.

The last update literally came out about

just one week ago. We do these updates now quarterly. It's done by our environmental epidemiology service within the Department of Veterans Affairs.

Now, I should say that this issue came up of how the media interprets information that goes out to them. And we've been acutely aware of how this information might be interpreted.

We really started generating it primarily for internal purposes. We use it, as I say, as a matter of kind of health surveillance, looking for trends in health in returning veterans.

We also use it, and I'll talk a little about this, in terms of outreach. We get, we also get addresses, names and addresses of these new veterans so we can mail them information about our programs, for example.

But once you start publishing something like this and once it goes out into the real world, into the rest of the world, it, of course, takes on a life of its own. And we've had a lot

of soul-searching and a lot of thinking about how to try and put all the caveats into one of these reports.

And I think the main caveat is that this is not an epidemiological study. It's a kind of a health, very crude health surveillance.

But somehow sometimes some of the members of the media don't quite get that, so you see this report get quoted in ways that we don't really think is appropriate necessarily.

And also what we've found is that no matter how many caveats you add, you can't add enough. You can't -- if somebody chooses to misinterpret something or report it in a, in a way that seems kind of goofy to us, we can't really stop them.

But here are some of the standard caveats that we include and you'll hear some -- I'll talk about some more of them.

This only considers our roster of OIF/OEF veterans. It is only -- obviously only includes those who left active duty. And so it

doesn't include anyone who's still in the service. So it's incomplete. Doesn't include everyone who served.

It doesn't distinguish because of the nature of the data -- I can get into that if anyone's interested in why this is the case. But we can't distinguish between those who served only in OIF versus only in, only OEF or both. So they are lumped together.

It's not realtime. It only -- our last -- current roster only includes separations through last August, end of August this year.

And, of course, I should add we don't include deceased veterans either.

In our latest roster we have more than 631,000 OIF and OEF veterans. These are veterans, as I say, who served in Iraq and Afghanistan, the current conflict, came back and separated from the military service.

As you can see there, biased weight surprisingly I think towards Reserve and National Guard.

If you look at the actual proportions in Reserve and National Guard versus active duty who are actually in service in Iraq, it's balanced the other way.

For some reason, we're -- a lot more Reserve and Guard are leaving the military after being deployed to Iraq and Afghanistan.

And as I mentioned, I kind of already discussed this, but very quickly, we compare that roster of 630,000 OIF/OEF veterans with our electronic computerized inpatient/outpatient data records and we then look at using the standard ICD-9 codes for their diagnoses, and we can list out their diagnoses by their frequency.

And I'm getting back into some of the caveats. We started adding -- this report has grown and grown and gotten longer and longer as we tried to add more and more caveats, not that it's been all that helpful really in preventing people from misunderstanding it.

But we feel compelled to point out that this data is really primarily administrative data.

We're not reviewing patients' charts or anything like that. We are going through what is essentially administrative data. And so you have to be, you have to be cautious in interpreting it.

It only applies, I think the main caution is it only applies to those veterans who have both separated from military service and veterans of OIF and OEF and elected for some reason to come to VA for their health care. And it's a very selected population.

DR. SHAMOO: Adil Shamoo. Can I have a qualification? Are you talking about the 631,000, that's everybody who's been separated from, from the operation?

DR. BROWN: Yes.

DR. SHAMOO: Not only those who came to VA; is that correct?

DR. BROWN: Right.

DR. SHAMOO: Thank you. Sorry.

DR. BROWN: All right. You can read the rest of these caveats on your own. I think they are pretty self-explanatory.

I'll get to actually some of the data that we found.

I think probably the most -- getting to your point, Shamoo, yes, you're exactly right. 631,000, that's the whole roster. That's everyone who separated.

What we found is 32 percent of those or 205,000 of those have come to VA either as an outpatient, primarily as an outpatient or -- but also inpatient as least once since they separated from military service.

And 97 percent, in fact, come on an outpatient basis, which is consistent with how we provide health care in general to veterans.

Amongst those who have sought health care, about equal amounts, 101,000 come from active duty and about almost the same amount have come from Reserve and National Guard. About maybe even split.

One of the questions, of course, that we get asked is, and you kind of heard this theme throughout, is are we ready collectively to deal

with the health issues of these new veterans or are we going to be overwhelmed somehow by this new population of veterans?

And our answer -- I mean, it's kind of hard to answer that. There's different ways we can talk about that.

But we argue that Department of Veterans Affairs is a very robust and a very large medical care system. We anticipate providing in this current -- in the last fiscal year that we have data for this care to 5.3 million individual veterans.

And so these new veterans, the 205,000 veterans who have sought health care for us collectively since we've started doing this back in 2002 represent only about 4 percent of that, of all the health care that we provided at least in fiscal year '05.

So we would argue at least in terms of numbers, it's small. It's a very tiny number. But, of course, in terms of significance, it's critical. I mean, this is a new generation of

combat veterans that are coming to VA for their health care. So it's a critical, it's a small but critical population to us.

This breaks down where they come from. Basically veterans live where all Americans live.

Yes?

MS. EMBREY: Ellen Embrey.

DR. BROWN: Please.

MS. EMBREY: I have a question on the slide 8 which is a couple slides back, the Reserve and National Guard members, they come off active duty, but they may still be members of the force that's just not on active duty.

DR. BROWN: Correct.

MS. EMBREY: Are these folks that have gotten out altogether or are they still Reservists but not on active duty?

DR. BROWN: The latter. They are eligible for VA health care. It's a good question.

Typically with Reserve and National Guard, we can -- when a Reserve and National Guard

will have had multiple tours and they'll have multiple DD-2 -- whatever it's called, the separation form, DD-214 or whatever it's called, if you look at the demographics, there's really nothing surprising there. The veterans that are coming to VA are primarily male. They are young. Their peak age is between 20 to 29. They are primarily Army. As I mentioned, they are roughly split equally between active duty and Reserve and Guard. And, of course, they are primarily from enlisted ranks.

The diagnoses -- I'll get to a table in a moment that actually shows the ICD-9 codes broken down by frequency.

But the bottom line is that the diagnostic codes that we see are kind of all over the map. They don't, they don't really tend to trend in any one particular area. They are, they are kind of what you would see from any typical, we think, any typical outpatient group.

We -- somebody noted in this data that there are more than -- almost 8,000 discrete ICD-9

diagnostic codes that have at least one veteran in them.

The three most common health problems that we've seen are, not surprisingly, musculoskeletal ailments, principally joint and back pains -- joint and back disorders which we think is consistent with the kind of occupation that these people are involved with, obviously, the second is mental disorders, and the third is symptoms, signs and ill-defined conditions.

This gets at the frequency of possible diagnoses among these recent combat veterans.

And, again, you can see that the top, the top item down at the bottom is, this is separated by ICD-9 code, but down third from the bottom is diseases of musculoskeletal system/connective system, 42 percent, mental disorders, 35, almost 36 percent, and then the rest are less than that. You can see this. And then the third is, as I mentioned earlier, signs, symptoms, ill-defined conditions.

People, of course, are focused very

closely on mental health issues amongst these new veterans, and so we broke that down further in this particular slide.

You can see we're seeing veterans diagnosed with PTSD. We see roughly almost 34,000. That's about -- I think that works out to something like 15 percent of the total. I forget the exact number. And this is, this is one of the items that's gotten quoted a lot. It gets picked up by media to say, you know, 15 percent of veterans have PTSD.

But it's not, it's not -- it's an unfortunate conclusion because of all of the points that I made. This is only those veterans who come to VA. It's not, it's not, it's not an epidemiological study that -- it's not a population-based study that allows you to really draw conclusions about veterans as a whole.

And, secondly, the concern is that these diagnoses, as I mentioned, this is administrative data, so some of them are rule-out diagnoses. We have a little bit of data that shows that probably

one in four of these diagnoses don't get confirmed. For example, they are rule-out diagnoses.

But, nevertheless, there it is. I mean, we don't want to underestimate it either. We are seeing mental health problems amongst these new veterans.

To summarize, recent Iraq and Afghan veterans are presenting to VA with a wide range of possible medical and psychological conditions. We stress that we really can't make recommendations to our health care providers about a particular test or evaluation to use because these patients look like more or less to the first approximation like patients, like any other group of patients, so there's nothing really special that we can recommend to look out for. Therefore, veterans should be worked up based on the signs and symptoms they present.

I'm not going to go over that last point here. And, again, this last summary is really trying to, to emphasize the caveats and

limitations of this data.

And I think that is -- yeah, that's -- I think that's all I'm going to say, except to say we're going to continue this program monitoring these veterans.

The last point I would make is that we also -- I mean, we're aware again, now that we've pointed out so carefully, that this data is not really a substitute for epidemiological studies.

We also feel -- we essentially always had plans to go ahead and start setting up to do, preparing to do the epidemiological studies, morbidity studies, mortality studies that one would need to really characterize the health of these veterans as they, this cohort, moves, as it starts to age, really in the same sense that's we've done with Vietnam veterans, we had these studies ongoing with veterans of the 1991 Gulf War, and we're planning on doing those studies as this population moves on and gets older.

And that's the last slide I have, and I'd be happy to answer any questions.

(Applause)

DR. POLAND: Give you a medal, Mark, for achieving that. Thank you.

Yes, sir.

DR. KAPLAN: Kaplan. Are most of those or all of those claimed to be service-associated disabilities?

DR. BROWN: These are not, these are not disabilities. These are not necessarily claims.

DR. KAPLAN: But, I mean, of 600,000, a third of them came to the VA, if I read that right, for medical care, correct? Is that right?

DR. BROWN: This is strictly for medical care.

DR. KAPLAN: Yeah.

DR. BROWN: One independent from the process that they would have to initiate for a disability claim.

DR. KAPLAN: Okay. I'm not sure I understand that, but maybe somebody will explain it.

DR. BROWN: Well, you have to -- there's

two different -- the part I'm talking about is purely the medical care that we provide.

A veteran may very well elect to file a claim for one of those diagnoses, but that would be a separate process. That's not recorded here.

DR. KAPLAN: So they may be in there, they may not. You just don't know what the breakdown is; is that correct?

DR. BROWN: It's not -- I just didn't present it.

DR. KAPLAN: Okay.

DR. BROWN: This is, this is strictly health care, strictly health care.

COLONEL GIBSON: Let me add -- this is Colonel Gibson.

Let me add to Ed's comment here or Ed's question that might help.

A few years back there was Congressional language passed that allows veterans two years of care at the VA where you do not have to prove service connectivity to be authorized care.

These folks certainly fall within that

window. That's, that's why the service connectivity issue that you're bringing up is not really clear.

DR. POLAND: Okay.

DR. HALPERIN: Bill Halperin. Public health surveillance is a topic that's really dear to my heart. And I actually -- I don't think you go far enough in disclaiming that this is neither research nor surveillance.

What you essentially have here is usage survey by a group of people who have an entitlement.

It would be much like looking at I belong to Horizon Blue Cross and trying to make some sense of the health of the insured by looking at what they utilize.

It's not surveillance. This group could be having a horrendous excess of some occupationally related exposure, and you wouldn't know it, or they could have an amazing deficit of some phenomenon because of healthy worker effect, and you wouldn't know it.

It's not population-based. It's -- we have no way of relating the numerator to the denominator.

It's essentially not surveillance. It's usage survey.

And I think by calling it surveillance and you disclaim that surveillance isn't research, you're running against the grain of the public health community which would argue that surveillance ought to be done with the same quality as research.

You're running against the grain of many industries in the United States that keep very good data on what happens to their former workers, having complete access to denominators and making strides to get the numerator data as well.

So I really don't think you go far enough in disclaiming the research aspects of this, and by calling it surveillance, I think it's problematic for surveillance, and I'd really urge that it be called some sort of an incomplete usage assessment.

DR. BROWN: Well, you're taking it too personally, Bill. We didn't do it just to annoy you, really.

DR. HALPERIN: I'm speaking for a group of people, not personally.

DR. BROWN: I would say we call it, actually we call it, if you look at the title of the report, it is called a utilization report.

I mean, I don't disagree with anything you've said, really.

And I think if you look at it, we put all those caveats in there. I tried to cover it in a very quick way, those points.

I don't disagree with what you're saying. I think for our purposes, it's very useful data, because we get these questions about, you know, "What's going on with the veterans that you're seeing?"

We get -- so for us it's been incredibly valuable.

The other thing is regardless of whether you're willing to call it a surveillance study or

not, and I agree with the points that you're making, this data has been enormously popular. It's probably one of the most popular reports that VA has put out recently. It gets picked up by Congress, it gets picked up by the media, it gets picked up by veteran service organizations, it gets reported on.

And I think that the reason -- well, I think what's going on, my sense about what's going on is people want to know, Americans want to know what's going on with these, what's going on with these veterans, what do they look like, what are we seeing.

This is, limited as this is -- and, again, I'm not going to disagree -- I agree with all the points that you make -- this is what we have now to go on.

DR. HALPERIN: Just a little repartee, though. If you're calling this data the "Congress wants to know what's going on with the veterans," I just hope that it's not misleading in the sense of we don't know what's going on with the veterans

healthwise comparing observed with expected from this data. All we know is what people -- what kind of care people are utilizing.

DR. BROWN: Sure.

DR. HALPERIN: So even in your response, I just worry that it may be describing this data set in ways that it just can't be used.

DR. BROWN: We think it's, we think it's absolutely not misleading.

You know, I mean, I think one of the problems that we face as this data has gone out there is it gets at the issue you raise. It gets misinterpreted. I mean, people will quote it as saying overseeing these rates of -- they'll quote it as if it's a study.

We can't help that, nor at this point, frankly, can we stop producing it.

This is, as I say, this is probably one of the most popular reports that we have put out. And I think that the reason is for better or for worse, I think -- and we recognize those caveats that you're mentioning.

Again, I agree with every, every point you've made -- this is the best snapshot, the best picture that we have of what's going on with this population.

And I think, I think, again as I stated at the end of my presentation, our sense is that ultimately what we have to do is to do a proper population-based study. We recognize that.

We can't -- we aren't in a position to start that yet, but we will. We recognize that that's inevitable; that this is very preliminary, and it's a mistake to use it to characterize the entire population for the reasons that you mentioned.

DR. POLAND: Okay.

DR. GARDNER: Pierce Gardner. I hope I can say this right. Can a veteran apply for disability without coming through the VA system?

DR. BROWN: Well, I think, I think I understand your question.

You could, you could apply for disability compensation without coming in for

health care, but it's all part of VA.

DR. GARDNER: I'm trying to respond, and you probably saw there was, there was -- on Monday USA Today had a front-page article --

DR. BROWN: I didn't notice that.

DR. GARDNER: -- highly critical of the continuing funding of Gulf War Syndrome studies.

DR. BROWN: Oh, I thought you were talking about another criticism.

DR. GARDNER: And the figure that I think I have straight in my mind was I believe the total number of people counted as Gulf War veterans was something like 699,000.

DR. BROWN: That's correct, 700,000.

DR. GARDNER: And the claim was that 199,000 had applied for disability benefits for a war that was not very long.

DR. BROWN: Um-hum.

DR. GARDNER: And the implication was -- and I just wondered how those -- it didn't really talk about the criteria for how those were judged. And I just wondered whether your talk today had

anything to do with that.

DR. BROWN: Not really. The only comment I would make on that is that if you look at so-called era veterans, those who were in service at the same time as those who fought in the 1991 Gulf War, their disability claim is also quite high. It's not quite as high as those who were deployed, you wouldn't expect it to be quite that high, but they are close.

So, I mean, this is really quite an aside here, but it is an interesting observation that the rate at which veterans from different eras, if you go back to, say, World War II and the Korean War and Vietnam, '91 Gulf War and our current wars, the rate at which veterans apply, the percentage of total veterans of these different eras who apply for disability goes steadily up. So that veterans for World War II, less than 10 percent applied for disability, whereas something like, I don't know, roughly a third of the veterans from the 1991 Gulf War applied for disability. It's steadily going up.

And I can't -- I don't know how to interpret that. It can't possibly be that wars or getting worse or are more demanding on our troops than the Second World War was. I don't believe that.

So there's some phenomenon going on that makes people more willing to apply for benefits, apparently.

But having said that, that has nothing to do with what I presented.

DR. POLAND: One or two more brief comments. We are technically supposed to be out of the room at five, and we'll just do a quick --

DR. BLAZER: This will be very brief. Dan Blazer.

There are many, many, there are many, many theories about why we see this increased application for benefits, a lot of it having to do with this unexplained physical symptoms category that's loosely been also categorized as Gulf War Syndrome which has also been extremely controversial. No need to go into that.

But, I mean, that has been looked at a lot in terms of exactly why this is happening, not only how do you categorize these individuals, why this is perhaps happening, and those studies continue to go on.

I think in defense of what Mark is saying here, I think what this gives us is a very important snapshot of what the VA has seen and potentially could see in the future in terms of the burden of care in the VA. I think that's the critical issue.

This is not an epidemiologic study. It cannot tell us -- I totally agree, this is not a surveillance study, it's not a prevalence study. You can't even begin to draw conclusions like that.

But it is important in terms of telling us the burden of care that might fall back on the VA and somewhat what the distribution of that care might be.

Again, it's not the best study, but it gives us some snapshot. And I think from the

mental health perspective, it tells us that the mental health care that may be required by the VA subsequent to this war is going to be significant.

DR. BROWN: Yes, I think that's how we look at it. We look at it for planning purposes.

And as I mentioned, we also use it for outreach purposes. We have these veterans' addresses, can contact them.

That's a good point.

DR. SHAMOO: Adil Shamoo. Okay. I'm convinced this is lousy data or not good data. But your conclusion -- you really got to understand the public. Your conclusion, this is not a very good data because it's not epidemiologically sound, et cetera, et cetera, and I was convinced by the comments I heard.

But at the same time, you make the conclusion that the distribution of the illness is no different than the society at large.

And there is a contradiction in that, and the public at large really loses confidence when, when they hear these contradicting sort of

set of statements.

DR. BROWN: Actually, I think that the reaction has been the opposite of that, really.

I think, my sense is that when people see this data, they have a different reaction than what you professionals do. Their reaction has been, Hum, it looks like VA is trying to stay on top of this and trying to monitor this and is concerned about this.

So I think -- I mean, I'm not surprised that you're going to get different reactions depending on different disciplines that you present this to, but I think it's been helpful in making it look like we're, we're trying to get out in front of this and trying to get out ahead and look out for problems.

Just -- I think, I guess, surveillance is a term of art, of course, and when you say surveillance, and I apologize for using that term loosely, but there's another sense of surveillance that I think that the data does get used for.

For example, if you remember a couple

years ago there was a concern that there was these eosinophil pneumonias that popped up in the Gulf War theater amongst veterans of OIF.

And you could look at this data and say that, Well, okay, are we seeing high rates of pulmonary disease, respiratory disease?

And at least those veterans who come in to see us, we don't.

I found that somewhat reassuring.

DR. POLAND: Colleagues, we'll stop for the day. We have a few items that we need to take care of.

I'd like Miss Embrey to make an announcement and then a few administrative remarks.

Thank you, Mark.

MS. EMBREY: Thank you, Mark.

(Applause)

MS. EMBREY: I will not be here tomorrow. And as the designated federal official, it is my obligation to designate an alternate when I'm not here.

So Roger Gibson will be the alternate designated federal official to open the meeting tomorrow.

COLONEL GIBSON: Okay.

DR. POLAND: Okay. We will adjourn for this evening. We will re-meet tomorrow morning here at 8:00 a.m. for those of you who want breakfast, and we will begin the meeting promptly at 8:30.

For those of you who are going out to dinner, we're meeting in the lobby at 7:00.

Any other business the Board needs to consider this evening?

(Whereupon, at 5:08 p.m., the PROCEEDINGS were adjourned.)

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