

UNITED STATES OF AMERICA

DEPARTMENT OF DEFENSE

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ARMED FORCES EPIDEMIOLOGICAL BOARD

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PHILLIPS SPACE CONFERENCE CENTER
BUILDING 201, 1750 KIRTLAND DRIVE
KIRTLAND AIR FORCE BASE
ALBUQUERQUE, NEW MEXICO 87117

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STEPHEN M. OSTROFF, M.D., AFEB PRESIDENT
AND
JAMES R. RIDDLE, COLONEL, USAF, BSC,
AFEB EXECUTIVE SECRETARY
PRESIDING

+ + + + +

WEDNESDAY

FEBRUARY 19, 2003

+ + + + +

8 A.M.

I N D E X

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P-R-O-C-E-E-D-I-N-G-S

8:00 a.m.

DR. OSTROFF: Good morning. And my apologies for not making it to last evening's festivities, but I feel a lot better this morning than I did yesterday, so my apologies.

I think what we'll do to get started this morning is to, now that Rick has the program books and has the other materials, that we'll do the presentation that we didn't do yesterday to get started. For me to save my voice, I'll let Rick to do the reading.

[Award/Presentation]

COL. RIDDLE: Okay, can you hear me? For superb leadership, excellent organizational skills and outstanding professional knowledge and willingness to assist and cooperate in all issues supporting the Armed Forces Epidemiological Board, Winter 2003 Meeting at the Phillips Base Conference Center, Kirtland Air Force Base, co-hosted by the Air Force Safety Center and the Air Force Research Laboratory, your efforts were instrumental in providing for the myriad of support and establishment of the professional working environment allowing for an exceptionally successful and productive meeting of the

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1 Board.

2 Your contributions have contributed
3 greatly to the Board's ability to produce important
4 policy and program reviews and recommendations for the
5 Department of Defense, signed Ms. Ellen P. Embrey,
6 Deputy Assistant Secretary of Defense for Health
7 Affairs.

8 (Applause.)

9 DR. HARKINS: Hello? Calling from
10 Maryland.

11 DR. OSTROFF: We're just giving some
12 awards.

13 (Applause.)

14 COL. RIDDLE: Marcia's got a great tour
15 set up for us this afternoon with the Air Force
16 Research Laboratory.

17 Deanna, can you hear me?

18 DR. HARKINS: A little bit, although I
19 must say the phone is cutting in and out. I'm getting
20 a little bit and then it will go silent for a few
21 seconds.

22 COL. RIDDLE: Okay, we're going to try --
23 I think a lot of it was speaking into the microphone
24 and we'll try to do that, but we can hear you very
25 well.

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1 DR. HARKINS: Great, okay.

2 COL. RIDDLE: So what we're going to do,
3 I've got about seven minutes on the Executive
4 Secretary report and Mark, we've rescheduled him and
5 so we're going to discuss your issues for about 45
6 minutes to an hour this morning.

7 DR. HARKINS: Okay.

8 COL. RIDDLE: Prior to the AFRL tour. so
9 if you'll bear with us about 10 minutes.

10 DR. HARKINS: No problem.

11 DR. OSTROFF: Go ahead, Rick.

12 COL. RIDDLE: So these slides should be in
13 your book and what I've done is just summarized the
14 Board's activities over the last quarter. And so
15 again, Board President is Dr. Stephen Ostroff, the
16 Deputy Director for the National Center for Infectious
17 Diseases. Currently on the Board, we have 17
18 appointed Members. We have two appointment decisions
19 that are pending that were forwarded over to the White
20 House about 45 days ago and that's Dr. Dan Blazer, who
21 will be on the Committee for Health Promotion and
22 Prevention and Dr. Tamara Lauder, for the
23 Environmental and Occupational Subcommittee.

24 We have two reappointment decisions that
25 were pending with this same package and that's Dr.

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1 John Herbold and Dr. Dennis Shanahan, and also the
2 reappointments on our consultants which are an annual
3 reappointment. As you know, the Board Members have
4 reappointments every two years.

5 The Nominations Committee met in November
6 and so we have several pending nominations and these
7 nominations are for one current vacancy that we have
8 on the Board that we will fill immediately, but it
9 will be for the other individuals coming on to the
10 Board in 2004. So hopefully, when we get these
11 through we'll be able to keep a full Board for an
12 extended period of time because it takes about 18 to
13 24 months to get an individual from nomination through
14 to the appointment. And so we have Dr. David Savitz
15 for the Environmental and Occupational; Dr. William
16 Halpern; Professor Susan Baker; Dr. Michael Parkinson
17 who is the Retired Air Force Colonel over at the
18 Surgeon General's Office and then Dr. Roberta Ness was
19 selected again by the Nominations Committee.

20 We have two prospective consultants, Dr.
21 Michael O'Donnell is in Health Promotions and
22 Prevention and Dr. Shamoo who is actually an ethicist,
23 that they thought would add some value as far as a
24 consultant for the AFEB.

25 Jim, we might have to get you to do the

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1 slides. Colonel Neville saved us yesterday.

2 So for our 2003 meeting schedule, we have
3 recurring Board Meetings, the third Tuesday and
4 Wednesday of February, May and September. Over the
5 interim period from the last meeting, we've had
6 several select subcommittees that have been working
7 very hard. We had the Select Subcommittee on the
8 Contaminated Human Remains. We met by teleconference
9 on 7 January and we had a recommendation signed and
10 over to the Assistant Secretary of Defense for Health
11 Affairs on 15 January and that was 2003-06.

12 We had the Subcommittee on Environmental
13 and Occupational Health that met by teleconference and
14 finalized their review of the statements of work.
15 That recommendation was signed by Dr. Ostroff
16 yesterday and that's 2003-07. That meets our current
17 commitment on that question from the Air Force Surgeon
18 General on providing recommendations back on the pay
19 clause and then for the Statements of Work on that
20 one.

21 We also had the select subcommittee that
22 you heard about yesterday with Dr. Poland and Dr.
23 Gardner which meet weekly.

24 And then we have the upcoming meeting,
25 Fort Detrick, Maryland. It will be co-hosted by

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1 USAMRIID and the Armed Forces Medical Intelligence
2 Center.

3 Here's our current Committee membership on
4 Infectious Disease, Prevention and Control,
5 Environmental and Occupational Health and Health
6 Promotion and Maintenance.

7 The select Subcommittee on Smallpox
8 Vaccines is an independent work group. Dr. Poland
9 went over this yesterday. They're working in
10 combination with CDC, ACIP. We plan on having several
11 face to face meetings in addition to these weekly
12 conferences as needed here at the beginning of the
13 program and hopefully those will taper off as we get
14 into both finishing up with the DOD program and into
15 the national program.

16 And here's the membership on that --if you
17 have mute capability on the phone that might work.
18 Yes.

19 We've already done more recommendations in
20 2003 -- and we haven't even had a meeting yet, this is
21 our first meeting in 2003 -- than we normally have in
22 a year. The Board has worked tremendously hard and in
23 fact, in the two-year period from 2000 to 2002 there's
24 been 100 percent increase over 100 percent increase in
25 the number of recommendations and issues that have

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1 been handled by the Board and formal recommendations
2 that have been made.

3 We have opinion recommendation on the DOD
4 smallpox vaccination program evaluation. I would say
5 we'll send that out, have cutoff in just a couple of
6 days and hopefully get that out as early as next week.

7 Current questions before the Board, we
8 went over these yesterday, the Public Health Advisory
9 Board for the DOD Deployment Health Research Center,
10 the Public Health Advisory Board for the DOD
11 Deployment Health Clinical Center, the Global Emerging
12 Infection System Program Review. We have the
13 anti-malarials in current practice in the military
14 which we put off until May. We have the
15 recommendation on QuantiFERON and what we're going to
16 discuss this morning which is review of the Iowa Army
17 Ammunition Plant Study in the Iowa Study Protocol.

18 Future questions for the Board for right
19 now for the May agenda, we have periodic physical
20 exams in the Armed Forces. We have primary
21 prophylaxis and we'll combine that with the overall
22 malarial chemoprophylaxis question and recurring items
23 on vaccine and immunization protocols to enhance
24 protection against biological warfare threat agents.

25 Important on this is that matrix that was

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1 developed last year has literally become Dr.
2 Winkenwerder's score card that he keeps updated and
3 tracks ongoing progress in the development of these
4 agents, the progress of the INDs and the eventual and
5 hopeful licensing of many of the vaccines.

6 We continue to enhance our website. We're
7 going to have a history section up there pretty quick
8 and we'll start building a bio and some other stuff on
9 past Board Members and Presidents. We'll have all of
10 our recommendations and reports up there and I think a
11 couple of links that we've added since the last
12 meeting are the 50 year history and the history of the
13 Commissions.

14 The transcripts will be up. We try to get
15 all of our meeting presentations, so this a good
16 resource.

17 For this last meeting we actually several
18 weeks prior to the meeting started adding all the
19 background material so in essence everything that you
20 have in your notebooks is also available
21 electronically on our website.

22 So that's it.

23 DR. OSTROFF: Very good. Rick, let me
24 compliment you and the staff and your office for all
25 of the tremendous work that you've been doing. We

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1 couldn't do as much as we've been able to accomplish
2 without the support that we receive, not only from
3 you, but also from the Preventive Medicine Liaisons.
4 So I think speaking for all of us, we thank you.

5 (Applause.)

6 (Whereupon, the proceedings went off the
7 record at 8:15 a.m. and went back on the record at
8 1:45 p.m.)

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A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N

1:45 P.M.

COL. RIDDLE: Jeff Gunzenhauser, we're doing the PM updates. We're hunting Jeff or Ken Schor.

CAPT. SCHOR: I'm here, Ken Schor.

COL. RIDDLE: Ken is on. You want to go first, Kelly.

Ken, I'm going to go ahead and put your slides up.

CAPT. SCHOR: Okay. Good afternoon. I'm still joining you from home. FedEx can't get through to the houses and finding out at 5:30 this morning down by the Pentagon there were no parking spots. So there's trouble all around here yet.

If we can go ahead and have the first slide, I'll go ahead and give you an update. I wanted to cover two major things today. That is an update on an old trend that I've updated several times, the sports medicine and injury prevention initiative and I also bring some things about vaccines that are near and dear to the Board, adenovirus, anthrax and smallpox. We've had some questions raised by the senior leadership of the Marine Corps and they're

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1 asking about how do we push the envelope to begin
2 these immunizations when they are through training.

3 If you could go to the third slide, and
4 that should say Marine Corps Sports Medicine and
5 Injury Prevention Initiative. As I've reported in the
6 past, we've established a pilot program and it's on
7 track and we're in about Month 5 of 27 in the entire
8 pilot program. The funding is very adequate for a
9 full-scale pilot program. For FY02 and FY03, the
10 Assistant Commandant and the Commandant have provided
11 significant funds out of their discretionary
12 allotment. Interestingly, Congress will severely
13 curtail discretionary funding our things in future
14 years, in FY04. We are getting the budgeting locked
15 in through the planning and budgeting process in FY04
16 and 05. We do everything from a funding standpoint on
17 line.

18 I have mentioned the number one
19 deliverable to Major General Jones who is in charge of
20 the Training and Education Command who is sponsoring
21 this initiative is a web-based Oracle-structured data
22 base. That is on line and can be turned on at six
23 entry level training sites like the Marine Corps
24 Recruit Depots, Parris Island and San Diego; the
25 Schools of Infantry which are in Camp Pendleton and

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1 Camp LeJeune and also the Officer Training Schools at
2 Quantico. That is going to be turned on this April
3 and we've had a look at it and it looks very useful
4 and user-friendly.

5 The primary module that supports this
6 initiative is an injury reporting module and it is
7 designed not as a medical report, but as a health and
8 safety report. It is designed to capture incidents of
9 injuries, musculoskeletal injuries to allow
10 differentiation between acute and chronic, to identify
11 some basic causal information like in recruits, "Where
12 did you get injured?" The recruit would be asked at
13 the clinic and also to assess the overall work impact
14 or training impact of that injury, how many days of
15 modified duty or how many days of no duty or whether
16 the recruit was sent to a rehab platoon for more
17 extensive injuries like stress fractures.

18 The strength of this data base is that it
19 is an injury module that is appended to a Marine Corps
20 total force personnel system and also is merged in
21 with recruiting data bases. So much of the analysis
22 that residents have done in support of me in the past
23 that has identified the attrition from musculoskeletal
24 injury, that is administrative data. So this report
25 is tied into that very robust administrative data

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1 base. They get a lot of demographic information and
2 you can track a Marine every time they move from one
3 platoon to another or are transferred so you get a
4 serviceman's lifecycle picture of that recruit or that
5 Marine.

6 Let's go to the next slide. There's a
7 couple other things that are all coming together.
8 This is a fairly comprehensive program and requires a
9 lot of interaction amongst different stakeholders. We
10 had tremendous support from Navy Medicine. We are
11 developing what we're calling a musculoskeletal
12 continuum of care so that we -- it's sort of a product
13 line is another term that's been used in Navy
14 medicine, so that we can span the spectrum from
15 primary care sports medicine to orthopedics to
16 rehabilitative medicine and try to organize that
17 across the supporting hospitals at Marine Corps bases
18 and identify the exact amount of musculoskeletal care
19 that they need and make sure that it meets their
20 needs.

21 We're looking at how to better credential
22 certified athletic trainers. There are some that have
23 been hired in the Navy Special Warfare community and
24 in some other areas, at the fitness centers. However,
25 they're not really -- some of them have not been able

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1 to do their full spectrum of athletic trainer care and
2 we're trying to work with the folks to allow that to
3 happen. Things seem to be very positive in that
4 respect. Just like in a university, we're using a
5 university model. Those athletic trainers will work
6 in collaboration and under the direction of a
7 physician, hopefully a primary care certified sports
8 medicine specialist.

9 We also have and perhaps Captain Bruce
10 Bohnker is on-line, but his department at the Navy
11 Environmental Health Center has hired an Oak Ridge or
12 an ORISE Fellow just in the last few weeks to help
13 provide dedicated analytical support for our
14 initiatives. So that's a very exciting help that
15 we're going to get.

16 Again, that individual will be able to
17 test drive the data bases that are being turned on in
18 April and will help start some of the data base
19 merging between clinical and the sports -- or the
20 injury reporting module.

21 The other thing is is that the Marine
22 Corps is continuing to dedicate funding and efforts at
23 creating and providing athletic trainer capability,
24 recognizing that if the Marine Corps owns that
25 athletic trainer, he or she is not going to be tied

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1 into the confines, shall we say, of a clinic. We want
2 those athletic trainers to be part of the command
3 structure of the unit that they are supporting. We
4 want them to truly be like a sideline athletic trainer
5 that you would see in college or high school or
6 professional sports. We don't want them tied to a
7 clinic necessarily, although they may be able to work
8 in and out of clinic settings. We are buying supplies
9 and equipment, allowing them to practice their
10 training skills.

11 And finally, the program management is
12 forming and developing. Perhaps Lieutenant Colonel
13 Brian McGuire is on line listening in this afternoon.

14 He has been identified as the director of this
15 initiative. He's a certified athletic trainer,
16 master's prepared and recently was the head athletic
17 trainer at Emory University. He brings great
18 experience and wears the uniform, so he has great
19 entre into the Marine Corps.

20 We also have recently finalized a position
21 description for an epidemiologist. We're primarily
22 looking for Ph.D.-prepared or DRPH-prepared
23 epidemiologist that can do analyses of data bases. We
24 would also accept an MPH-prepared individual that has
25 several -- at least three years of experience.

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1 And finally, we've had a transition task
2 force of key stakeholders in this, including myself
3 that is essentially the equivalent of a Board of
4 Directors and we're meeting almost weekly to keep all
5 the aspect of this program working.

6 And so that's my update for the Sports
7 Medicine Initiative.

8 I think what I'll do is go ahead and
9 address the vaccine issues before I pause for any
10 questions.

11 If you go to the next slide, the interest
12 in these vaccines is coming from the senior leadership
13 levels of the Marine Corps and the one adenovirus, a
14 very familiar issue to the Board, seems to have been
15 energized by the December 2002 pneumonia outbreak that
16 was reported in the press at MCRD San Diego. The
17 adenovirus itself and its relationship to the
18 pneumonias which were primarily Group A, that was just
19 reported this week in the MMWR, by the way. The
20 relationship of adenovirus to those pneumonias is
21 uncertain. There were some cultures taken. The
22 reported incidents of positive adenovirus cultures in
23 those with pneumonia was 11 percent. That was not
24 reported in the MMWR.

25 So we don't quite what the relationship

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1 is. Meg Ryan has reported that the 70 percent
2 background prevalence of adenovirus did not show any
3 significant changes either right before or right after
4 the outbreak of pneumonia. However, the leadership at
5 the recruit depot has gotten energized with the issue
6 of upper respiratory infections and they're asking
7 when will adenovirus vaccine be available to recruit
8 training again.

9 Some different arenas and directions,
10 there's been some rising interest in anthrax and
11 smallpox vaccines. We're beginning to think about
12 starting them at recruit training and the primary
13 thing is as the leadership looks at the burden of
14 execution that they're seeing with the operating
15 forces, as we mobilize and deploy forces right now,
16 the difficulties that those forces have had is giving
17 these immunizations to active duty and reservists.

18 Next slide, please. So I've been able to
19 have a resident Lieutenant Commander Andy Vine do some
20 research into these vaccines and just wanted to give a
21 little bit of an update to the Board at this point.

22 With adenovirus, the bottom line with this
23 vaccine is it seems like we're not going to have it
24 until 2007. As many members of the Board probably
25 realize, you have to -- the manufacturer will have to

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1 reacquire relicensure of the vaccine. It will have to
2 go through Phase 1 through 3 testing for FDA trials
3 and also the plant which is being built in Virginia
4 has to go through BLA certification.

5 From the best that we get from some of the
6 program managers talking with them, there does not
7 appear to be any major funding issues. That seems to
8 be on line and appropriated at this point. I guess
9 the issue would be if there were any delays in
10 additional funding.

11 Also, it looks like trying to accelerate
12 this to get to get vaccines available earlier than
13 2007 would seem to be an incremental impact at best.
14 From our experience of trying to get a status report
15 on this, I think I would like to advocate that we
16 should try to get regular, rather than active status
17 reports from the program manager. This would enhance
18 the Services' ability to monitor the progress of the
19 production of this vaccine. It would allow the
20 Services and Health Affairs, I think, to synchronize
21 policy to get this vaccine reinstated as quickly as
22 possible at recruit training.

23 In other words, rather than waiting for
24 the vaccine and letting the tail of logistics wag the
25 dog, we'd like to have the dog and the tail wag

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1 simultaneously at least.

2 Let's go to the next slide on anthrax
3 vaccine. As I think much of the Board knows, the
4 Department of Defense essentially has an exclusive
5 contract with BioPort and is what we would describe as
6 a conduit for all anthrax vaccine that's produced.
7 Interestingly, and this is somewhat of an acute
8 problem that came up at the end of last week, the
9 demand for this vaccine in the short term is hugely
10 exceeding supply. The demand -- I'd rather not
11 discuss how many doses there are available for
12 distribution over this telephone, but because of the
13 potential sensitivity of that number, but let's just
14 say that the DOD in the next several months could use
15 all the doses that are currently available and have
16 been released by FDA.

17 The only other problem with this is that
18 there are other folks like coalition partners that the
19 President is working with. There are also other
20 federal agencies that are supporting the global war on
21 terrorism. There's also the issue of the national
22 contingency stockpile which may be a few doses behind
23 in schedule and in filling up. So there's a lot of
24 demands that are going on and I understand from
25 Colonel Diniega that there's a vaccine allocation

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1 working group under a separate limb of DoD, the policy
2 limb, and they're trying to sort out all these
3 incredibly high demands for vaccine at a time when
4 there's a fairly meager supply and DoD is apparently
5 burning a lot more vaccines because there's a lot more
6 folks that are being identified for deployment than
7 were ever modeled before.

8 So that's the current short term
9 situation. The hope is from Colonel Randolph who
10 heads the military vaccine agency that issued the
11 release over the next two to three weeks, however, the
12 timing of this probably couldn't be worse.

13 Just what we've been able to find in the
14 second bullet with the procurement strategy is that at
15 least through this fiscal year and perhaps into next,
16 DoD was looking to procure about \$2.8 million a year
17 and from our calculations, we figure that if you were
18 to expand this to all recruits which means about
19 250,000 accessions annually across DoD, including
20 reserve accessions, that would burn about 1 million
21 doses a year if you assume that they will get 4 doses
22 in their first year. So it looks like a procurement
23 strategy of 2.8 million doses may not be sufficient to
24 support expansion to immunizations during recruit
25 training.

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1 Interestingly, we find that by this next
2 January, that the current production capability of
3 BioPort should double to 6.4 million doses. I think
4 that's a good sign and maybe will allow some expansion
5 of the program.

6 The problem that I'm finding and I've
7 talked to Ben Diniega about this is that you can't
8 find a piece of paper that actually defines what the
9 Secretary of Defense or the Deputy Secretary of
10 Defense want to do with the program in the future,
11 even on classified settings. So that it's not clear
12 what the way ahead is by DoD, whether they want to
13 expand the scope of the anthrax vaccine immunization
14 program beyond the 14 higher threat countries or where
15 they want to go with this.

16 So I see that there would be a need to
17 synchronize the DoD policy with future availability
18 which looks, outside of the short term, looks pretty
19 good and I think that you need to think about 12 to 24
20 months ahead of the supply train and that seems to be
21 something that's very difficult to do. And obviously
22 fraught with difficulties, things don't get released
23 on time. There are other delays that we have all
24 painfully learned. And it's something that I think
25 the Marine Corps internally will have to look at to

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1 see where in the training pipeline, whether it's at
2 recruit training or at the schools of infantry which
3 ever Marine goes through either a shorter course or a
4 longer course, but whether it be their occupational
5 specialty training, their technical training, what the
6 best time is to introduce or think of introducing an
7 expansion of the anthrax program to what I call de
8 facto total force policy.

9 If you could go to the next to the last
10 slide, the smallpox vaccine. I think you all know, if
11 the DoD wanted to expand this immunization program and
12 if you wanted to put it into recruit training, we
13 would need to produce more vaccine.

14 (Music interruption.)

15 Our understanding, including managers,
16 could order -- can you still hear me?

17 DR. OSTROFF: Yes, but we hear music as
18 well.

19 CAPT. SCHOR: That's not my end, but it
20 sure is nice.

21 (Laughter.)

22 I don't play that very well at all.
23 Anyway, regardless of what happens between the DoD and
24 the Department of Health Services concerning the
25 smallpox vaccine, it looks like the earliest

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1 feasibility is going to be about FY05. And that's
2 talking to the program managers.

3 You know the Marine Corps and I think
4 perhaps the other services would agree that
5 reinstating smallpox vaccine at recruit training may
6 have some distinct advantages as we have all learned
7 recently the issue of --

8 (Music interruption.)

9 -- families from the rest of the
10 population. We found out in the past the best thing
11 to do is through training, you can --

12 (Music interruption.)

13 -- inside of the gate. So there's some
14 unique advantages to think about this at recruit
15 training. However, again, it's very uncertain from
16 our perspective whether DOD wants to go with the
17 smallpox program. Obviously, there's a tremendous
18 effort --

19 (Music interruption.)

20 -- also Stage 2 --

21 DR. OSTROFF: Ken, can we ask you to just
22 hold on a second because we can virtually not hear you
23 over the music. They're trying to fix it.

24 CAPT. SCHOR: Okay, I'll wait.

25 (Pause.)

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1 CAPT. SCHOR: Anyway, if you'd like me to
2 go ahead and restart.

3 DR. OSTROFF: Go ahead.

4 CAPT. SCHOR: Would you like me to start
5 from the fourth bullet on the smallpox slide?

6 DR. OSTROFF: Go ahead.

7 CAPT. SCHOR: You know I think, similar to
8 the anthrax program, it's pretty unclear to the
9 services where DoD wants to go with the smallpox
10 program beyond where it currently is. And it would be
11 nice to have some clarification of that for the
12 future, again, so that perhaps we can decrease the
13 burden, the immunization burden of the operating
14 forces, especially with this particular vaccine.

15 And I think the Marine Corps would
16 probably be a very strong proponent. We're working
17 through our position on this to try to figure out how
18 we might influence this progress. I believe the
19 Marine Corps would be a fairly strong supporter of
20 expanding smallpox, perhaps even over anthrax into the
21 recruit setting for the advantages I mentioned above
22 in the third bullet.

23 Let's go on to the last slide. I guess
24 I'd pass along what I thought were two things that we
25 learned as we addressed these issues.

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1 I think the services ought to get regular
2 status reports from the vaccine program managers. We
3 found it very difficult to get accurate information
4 from the program managers, not because the program
5 managers didn't want to give us that information, but
6 it was often hard to find the program managers. It
7 was often hard to get the kind of information that our
8 leadership would want us to have, such as when are you
9 going to have it, what's the schedule, that sort of
10 thing.

11 And we know that there are slides and all
12 that sort of stuff that's presented, but I don't think
13 it's addressed to the leadership of the services who
14 are beginning to realize how important these programs,
15 these force health protection programs are.

16 Finally, I don't know if this is a fallout
17 from the pain that we've all gone through with the
18 anthrax vaccine issues over the last several years,
19 but I think there's been a tendency or there is a
20 tendency to let the supply or availability of vaccine
21 lead the policy and I'm not sure that's the way it
22 should be.

23 I think there should be a better
24 synchronization between looking ahead as to when
25 vaccine is going to be available and coordinating with

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1 the services, recognizing that there are some issues
2 that the services have to address that take weeks and
3 perhaps months for them to conduct their own studies
4 for implementation issues. Just these issues such as
5 where and when is the best spot to introduce anthrax
6 vaccine into an accession pathway for a particular
7 service. I think that we need to get out in front of
8 this power curve and start asking these questions
9 perhaps 12 and 24 months ahead of when the expectation
10 of vaccine is to be realized.

11 Those are my three pence and that's about
12 all I have for the Board at this time.

13 DR. OSTROFF: Thanks very much. Let me
14 open it up to the Board for questions or comments. I
15 have a couple. One question that I would ask is while
16 I know that the report of the Group A strep outbreak
17 at the Marine recruit depot was in the MMWR, were we
18 going to be hearing from one of the other services
19 about what actually transpired in that investigation
20 and what's being done to assure ourselves that there
21 won't be a repeat of that.

22 Okay, the second is regarding the issue of
23 the adenovirus vaccine. I'm a little bit dismayed by
24 what I just heard from you that the delivery date is
25 now pushed back to 2007. Those around the table may

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1 recall a year ago at this time when we were in San
2 Diego when Dr. Winkenwerder was actually present at
3 the meeting, he made a very firm commitment to do what
4 he could conceivably do to push forward the
5 deliverable date for that vaccine and it doesn't sound
6 like this is consistent with what I would think that
7 either he or we would feel is a reasonable time frame
8 to get this accomplished. And I know he very
9 specifically made the comment a year ago that if we
10 can get some of these other things through the process
11 in a matter of a year or two, why can't we do it for
12 this particular vaccine and I quite frankly don't see
13 what some of the obstacles happen to be and I would be
14 very willing to remind him of the commitment that he
15 made to the Board a year ago and see if we can do
16 something to speed this up.

17 I will say quite frankly that for those
18 around the table who have been watching and heard the
19 President's State of the Union Address where he
20 addressed the issue of the development of the Bio
21 Shield Program which has been basically tasked to NIH,
22 I think to a certain degree that is a result of the
23 difficulties that DoD has had in bringing some of
24 these products for the BW threat agents through the
25 process and this is yet another example of that and I

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1 think that at some point DOD has to step up to the
2 table, particularly for a vaccine that has purely
3 military applications at this point and say we're
4 going to do our part to get it out the other end of
5 the pipeline.

6 Other comments?

7 DR. BERG: This is Bill Berg. I'd just
8 like to add my endorsement. I think it may be
9 appropriate to talk to Dr. Winkenwerder, as you
10 suggested.

11 CAPT. SCHOR: The audio is breaking up.

12 DR. OSTROFF: Greg, do you have any
13 thoughts?

14 DR. GRAY: This is Greg Gray. I've
15 followed this a little more closely than some I think
16 and I think what Barre Laboratories and their
17 subcontractor -- well actually Barre is the
18 subcontractor, I think -- would say is well, we're a
19 generic pharmaceutical company and this is our first
20 vaccine product and although we won the grant, we now
21 have to produce the facilities and there are just many
22 unexpected delays.

23 So you know the problem may be akin to the
24 smallpox problem. In other words, maybe we need
25 multiple manufacturers to solve something like this.

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1 I don't know. I think they're going to argue that
2 they have very real obstacles in front of them, some
3 of which they anticipated and some of which they
4 didn't. And they can't do much about it. I don't
5 know how much pressure he can put on them to build the
6 facility.

7 I think perhaps the program officer would
8 have more detailed information on that.

9 DR. PATRICK: Just a brief comment. This
10 is Kevin Patrick.

11 Ken, great job on this injury prevention
12 project. I think that this is wonderful that this is
13 moving forward and sounding like it's becoming
14 institutionalized with the program management that's
15 forming and I think this is really an exemplar
16 program. This is a nice program that is going to save
17 a lot of money, a lot of time, a lot of pain and a lot
18 of effort.

19 CAPT. SCHOR: Thank you. You're breaking
20 up a little bit on audio.

21 DR. PATRICK: Well, just good work and I'm
22 glad to see this becoming institutionalized.

23 Where is that going to happen?

24 CAPT. SCHOR: The program management
25 office will be headquartered out of Quantico at the

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1 Training and Education Command in Quantico and so that
2 will be sort of the nerve center and then the entry
3 level training sites are at the two recruit training
4 depots, Parris Island, San Diego. The schools of
5 infantry which are in Camp LeJeune and Camp Pendleton
6 and then the Officer Candidate School and the Basic
7 School which are also aboard at Quantico.

8 DR. PATRICK: I understood that. I was
9 just wondering where the program management was, in
10 fact, going to be institutionalized. It sounds like
11 that's at Quantico, right?

12 CAPT. SCHOR: Yes, sir.

13 DR. PATRICK: Yes.

14 DR. OSTROFF: Yes, I'd like to echo
15 Kevin's comments. That's a very impressive response
16 to the problems that we've seen in relation to
17 injuries. We certainly look forward to hearing more
18 about it and you're to be commended for really taking
19 the bull by the horns.

20 CAPT. SCHOR: Thank you. It's been good
21 to work in collaboration with the leadership of the
22 Marine Corps and once they seized upon the value of
23 it, I didn't have to do any more pushing. I just had
24 to catch up to them.

25 DR. OSTROFF: Great. Other comments?

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1 If not, thanks, Ken. And why don't we move on to
2 Kelly who is actually here in person, was able to find
3 his way to the airport yesterday and arrived last
4 evening.

5 Welcome.

6 COL. GARDNER: I just want to make one
7 comment. This is Colonel Gardner. On the expansion
8 of the anthrax and smallpox vaccine programs, I
9 thought it was fairly clear when Dr. Winkenwerder
10 announced the new policy in June on anthrax that we
11 had changed from a total force immunization program to
12 a threat based immunization program and that by
13 defining the threat you would be able to synchronize
14 the expansion with the supply, and I assume that
15 that's also been the philosophy with the smallpox
16 vaccine program also. So at this point I don't think
17 there's an intent, at least at this point, to ever go
18 back to total force policy, but rather threat based
19 policy and that philosophy is what was put forward and
20 changed in June.

21 LT. COL. WOODWARD: Good afternoon. It's
22 my pleasure to be here this afternoon and the
23 unfortunate weather circumstances prevented some of
24 the other preventive medicine docs from making it out
25 here, but I just would like to assure the Board that

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1 we greatly value your all's contributions and working
2 with you all and really always very much look forward
3 to these meetings, so I know they're very disappointed
4 that they couldn't all be here as well and so we look
5 forward to reconvening everyone in the spring.

6 I'm going to talk very briefly here this
7 afternoon about a DoD initiative to actually get some
8 forward progress across all services and our ability
9 to monitor, track and improve individual medical
10 readiness of our forces. The very short briefing here
11 I'm going to show you as a result of a tri-service
12 working group, quad-service working group that was
13 chartered by Health Affairs to develop the first steps
14 for a DOD-wide program for monitoring and tracking
15 individual medical readiness to serve a couple of
16 purposes. One purpose is to be able to present to the
17 senior leadership, including the Secretary of Defense,
18 a measure of the percent of the force that's fully
19 medically ready to deploy. The Secretary of Defense
20 is very interested in knowing how much of the force is
21 ready and how much is not ready at any given time.

22 The other purpose is to be able to provide
23 all the way down to the local level actionable
24 information that will help facilitate improving the
25 status of the forces. So it's a bi-directional

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1 purpose.

2 Next slide. The purpose of individual
3 medical readiness, what we call IMR program, is to
4 ensure that members are medically ready to deploy,
5 medically ready to do their military mission. And as
6 I said before, the other purpose is to provide
7 actionable information to Commanders and to medics to
8 know who needs what interventions to get them fully
9 medically ready, and who is actually not ready and
10 can't be made ready in a short order. So these are
11 the kind of purposes driving this program that I'm
12 going to describe.

13 What happened through the work group
14 process that met last fall is that they identified
15 there were a number of criteria that we agreed upon
16 that would be used to track and determine whether or
17 not individuals and then aggregate up into units and
18 services were -- what proportions were medically
19 ready.

20 The criteria that were agreed upon and
21 I'll talk a little bit about these, if you like, is
22 immunizations, are personnel current on their
23 immunizations? Do they have any deployment limiting
24 medical conditions? Their dental classification
25 system. Dental classification system, I think the

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1 Board, most members are probably aware of the DoD has
2 a standardized dental classification system which
3 basically puts every individual into Dental Class 1,
4 2, 3 or 4. Dental Classes 1 and 2 are classes where
5 there is relatively minor, if any, dental disease.
6 And 3 is a person who has significant dental disease
7 that might result in a dental emergency in the
8 foreseeable future. And Dental Class 4 is -- we don't
9 know, they haven't been assessed. So that is a well-
10 established classification system.

11 Readiness labs. Are people current on
12 established readiness labs such as DNA sample in their
13 record, blood type, et cetera. Have the individuals
14 had a current health assessment is another criteria.
15 And then finally, do individuals have the necessary
16 medical equipment -- individual medical equipment.
17 That is things like properly fitting and proper
18 refraction glasses if they need them; gas mask lens
19 inserts and other individual medical equipment. So
20 these are the six criteria that are part of the DOD's
21 individual medical readiness tracking system.

22 Next slide. This table shows how we've
23 got a sort of a color coding system that simplifies
24 the interpretation of the individual medical readiness
25 status from a green being fully medically ready;

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1 yellow meaning medically ready with just a few simple
2 interventions. And those would be things like if
3 someone needed an immunization. That's a fairly
4 simple thing to remediate. If someone needs a
5 laboratory test done, we could do that, for example.
6 Gray is unknown, that is if they had not had a health
7 assessment or they have not had their dental exam.
8 Then we really do not know what their category is and
9 so that's unknown. And then red is they are not
10 medically ready because they have conditions that
11 really should preclude them from deploying such as
12 being in Dental Class 3 or having a deployment
13 prohibiting medical condition which would be things
14 like recovering from major surgery or certain -- most
15 people with asthma, and that sort of thing.

16 Next slide. The flow chart for how an
17 individual would be categorized is shown here and
18 maybe doesn't project quite as well as I'd like, but
19 the point of this is actually each individual can only
20 be in one group, although they could actually be
21 delinquent in one or more or more than one of the six
22 categories, but you can only be in one individual
23 medical readiness category and trump is you're not
24 medically ready. So regardless if you have any other
25 delinquents, overdues on any of the other things, if

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1 you have a deployment-limiting condition or you're
2 Dental Class 3, you're not medically ready.

3 Next is unknown. If we don't know, then
4 we really can't put you in a yellow, green or red
5 category. We just don't know and then yellow is again
6 a category for people who need just minimal
7 intervention and then green is fully medically ready.

8 Next slide. What has been proposed is
9 that there be a single metric that be rolled up to the
10 level of the Secretary of Defense and that is the
11 percentage of forces that are fully medically ready.
12 In other words, what is the total ready capability as
13 far as we know and that would be the percent that is
14 green. Initially, this may be not the total force in
15 the denominator, but as we get started might be those
16 people who are on mobility or just the active duty
17 component and then maybe bring the Guard and Reserve
18 in later, but regardless, the idea is the percent that
19 are fully medically ready.

20 The other thing that we actually want to
21 track and bring attention to is the percent who have
22 known action due. In other words, where do you really
23 target -- where's the action in order to improve the
24 number that is reported and that is something that we
25 think is very important to track, but our

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1 recommendation is that only one go up to the Secretary
2 of Defense, but that down at the unit level what they
3 really need to know is who needs action and where are
4 those people?

5 Next slide. This construct may seem
6 rather simple, but in fact, for the Department of
7 Defense I think this is a major step forward because
8 all the services are trying to get -- we've all been
9 trying to get our arms around individual medical
10 readiness. We have some common vectors, but we have
11 somewhat different systems for how we report it and
12 how we aggregate our numbers and what have you. But
13 this program will take into account that under each of
14 those criteria services may have slightly different
15 policies and procedures for what are required. For
16 example, the deployment-limiting conditions, there is
17 not a single system across all services for how we
18 categorize service member in regards to health
19 conditions. So the Navy has one way of annotating and
20 tracking that, the Air Force has a different system
21 and so on. So in the short term we would like to,
22 rather than reinvent all those simultaneously, start
23 the measurement process and then start to work on
24 those other parts later.

25 Also, none of the services has the

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1 capability to report on all the six criteria. All the
2 services have some capability and we want to build
3 upon that and go from there.

4 Next slide. So the multi-service work
5 group presented to the Force Health Protection Council
6 a recommendation that we implement this method of
7 tracking individual medical readiness across the DoD
8 based on the six criteria that are presented, but do
9 it in a phased approach where we start with those
10 things that can be reported now and then we lay out a
11 road map for how, over the next 18 months, we will
12 achieve all of the measures DoD-wide.

13 Again, we expect we'll start with just
14 using perhaps part of the force as a denominator and
15 then build to bring in the reserve component, to bring
16 in geographically separated members and students and
17 those other groups into the denominator. And so we
18 think this is going to be a very powerful initiative.

19 There's a draft policy that's being circulated right
20 now for Dr. Winkenwerder to put this into policy, this
21 program and then we'll start reporting as soon as
22 April the first reports on this DoD individual medical
23 readiness.

24 That's all I have. I'll stop there.

25 CAPT. SCHOR: Thanks very much. Comments?

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1 I think this sounds like a good idea. You're right,
2 it sounds very simplistic, but I'm somewhat surprised
3 that there hasn't been something like this in the
4 past.

5 LT. COL. WOODWARD: I think, sir, a lot of
6 what has held back, a very -- a system that allows us
7 to regularly report this is really we don't have
8 across the board singular information systems support
9 to feed this system and we've been building
10 capabilities in different ways and this is going to
11 force us to really start converging towards having a
12 system-wide reporting of all these things.

13 We have -- some parts of this, for
14 example, are very paper intensive. The tracking of
15 individuals with deployment limiting conditions is for
16 the most part still very much a paper based system and
17 we have to over come that so as we -- in order to
18 capture one plus million people in the system and
19 regularly report it requires some information systems
20 support and some automated processes. And I think
21 that seems to be what's been hampering our ability to
22 achieve this sooner rather than later.

23 DR. OSTROFF: You could set up a
24 competition amongst the services to see which one can
25 get the highest percentage of green and get out an

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1 annual award or something.

2 LT. COL. WOODWARD: We do that in the Air
3 Force. I'll just tell you, we do have -- we can
4 report on five of six of these already in the Air
5 Force and it's very interesting. We have been doing
6 this for about two years now and it is -- when you
7 have -- we actually only have five criteria. We don't
8 have the individual medical equipment. In order to
9 get a unit 75 percent fully medically ready, you have
10 to have 90 percent of the individuals have to be
11 current for each of the components in order to achieve
12 a 75 percent for the unit. So it's very difficult to
13 get very high levels of medical readiness. The Air
14 Force last week, Air Force-wide was 65 percent and
15 that is -- that's a big accomplishment because we were
16 52 percent about a year ago. The ones that are the
17 hardest to keep current on are immunizations because
18 in immunizations there are many, many different
19 requirements, everything from anthrax for some --
20 those who need it, to meningococcus for some, to all
21 the routine immunizations. So it is interesting.
22 Each of the criteria in and of themselves can be very
23 challenging, but we're finding that immunizations is
24 the toughest one and achieving 75 percent at the unit
25 level is a very difficult thing. We have one major

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1 comment, specific command actually for the first time
2 achieve 75 percent for the entire command of
3 individuals being ready. So it can be done and I
4 think just by measuring is where we saw the progress
5 start. We started by just by measuring, not getting
6 too hung up on the results early on, but just sharing
7 the metrics, having people compare with each other and
8 saying hmm, I wonder why they're doing so well? I
9 wonder what we can learn from them. It's a very
10 productive process.

11 DR. OSTROFF: Other comments? If not, why
12 don't we move on to the Navy presentation. Captain
13 Bohnker.

14 CAPT. BOHNER: Can you hear me?

15 DR. OSTROFF: Yes. Can those on the phone
16 hear?

17 DR. MALMUD: This is Leon Malmud. I can
18 hear.

19 CAPT. BOHNER: I have seen ship drivers
20 get bragging about each other's -- how great they're
21 doing with just dental readiness, not even individual
22 medical readiness, but just the dental readiness; COs
23 of the ship sending the personnel force messages up to
24 the COs or to their Admirals, bragging, that kind of
25 stuff.

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1 I'm Captain Bohnker, I'm the Director of
2 Population at NEHC and I will be giving the Navy
3 preventive medicine brief today.

4 Jeff Young let me take this over. He's
5 been real busy with smallpox. I'll talk a little bit
6 about that at the end.

7 I had a problem with an oral surgeon about
8 two weeks ago. I'm still a little numb in my mouth
9 and my talking is a little bit confusing.

10 Next slide, please. We'll talk a little
11 bit about MRSA. That's at Parris Island. We'll talk
12 a little bit about Group A Strep at San Diego. A
13 little bit of MRSA at Great Lakes. Shipboard
14 norovirus which has been pretty big. We'll talk a
15 little bit about Medical Event Reporting to follow up
16 on the previous discussion. Very little bit about
17 smallpox and anthrax. I don't think we'll get around
18 to lost work days.

19 Background. Beaufort requested that we
20 provide some assistance back in late October 2002 on
21 some MRSA. They had a big outbreak down there,
22 community acquired. The XO there is an orthopod. It
23 was confirmed osteomyelitis and deep palmer space
24 infections and he was very, very concerned about that.

25 He's going to team with NEHC/NEPMU2 and Portsmouth,

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1 went down there the first week in November.

2 Next slide, please. The base sent down
3 review of CCS records, did some interviews and did
4 some environmental sampling. Whenever you do anything
5 with Parris Island, there's some great pictures. I
6 had to show you some of those.

7 (Laughter.)

8 Next slide. This is the CHCS printout of
9 the cellulitis and abscess diagnoses at the Branch
10 Medical Clinic and the Naval Hospital there. You can
11 see it just going along. Too complicated. There we
12 go. It kind of peaks in the summer and it really
13 peaked high -- next slide, please.

14 Next slide actually is a big one. This is
15 culture positive MRSA cases in recruits down at Parris
16 Island. You can see they were kind of bumping along,
17 ones and twos a month for a while and it really
18 started bumping up to the stars and we sent the team
19 down there and they had 87 or 67 in one month, just a
20 lot of them. They were really concerned about it.
21 Had a lot of big issues and this is actually what
22 drove the team down there. This is what the team
23 found.

24 We'll say they have gone down since then.

25 Some of that may be fortuitous, kind of weather

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1 issues. Don't know, but it really spiked it pretty
2 big there.

3 Next slide, please. First of all, they do
4 train the Women Marines down at Parris Island. They
5 don't do that at San Diego. Some issues and concerns,
6 handwashing/sanitation were a huge issue there. It
7 goes back to Meg Ryan's studies out of Great Lakes and
8 how hard it is to just institutionalize good, basic
9 sanitation in the recruit training population. A lot
10 of that was reinforced, but it was still a very big
11 issue that needs to be worked on. They do have a
12 bicillin prophylaxis program there. It goes back to
13 the older studies where we treat and monitor people
14 for strep infections and when they reach a certain
15 level, bicillin prophylaxis is given to them. There
16 was a lot of concerns about that. There were
17 different issues about that. They were doing it, but
18 they were concerned there were units that bleed over.

19 A couple of other issues of significance
20 down there, first of all, there is no preventive
21 medicine officer support for the recruit training
22 commands, particularly at Parris Island. In San
23 Diego, EPMU5 and NHRC have always provided a little
24 bit of support out there. Parris Island has never had
25 too much of anything like that. And it was felt there

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1 was a lack of preventive medicine officers' board at
2 Parris Island.

3 Finally, just a dedicated infection
4 control expertise at Beaufort was pretty thin. In
5 other words, they just weren't seeing too much and
6 needed better control there.

7 Next slide, please. This is San Diego,
8 the CNN coverage in January. Elevated inpatient
9 admissions with throat cultures for Group A strep.
10 They had a lot of those. They went to a much more
11 aggressive Pen/Azithro prophylaxis. That was in the
12 MMWR last week. I don't know that I can assure you
13 it's not going to happen again. They really jumped on
14 it pretty hard. The only flash unit sent I've ever
15 seen on a medical thing and it was ZZZ across the top,
16 came out at San Diego. It was impressive to see that,
17 see a flash message on that kind of situation. They
18 put a lot of effort into it. Most of it was Group A
19 strep. There was some influenza. There were some
20 other things. Ken talked about it some. Some other
21 people talked about it. We're still tracking that and
22 monitoring that one.

23 Next slide, please. Great Lakes had one
24 fatal case of MRSA pneumonia, also had influenza.
25 They're looking at some potential for some MRSA

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1 surveillance up there.

2 Next slide. This is a summary. We're
3 starting to see community acquired MRSA at the recruit
4 training installations. Particularly worse at Parris
5 Island. We're monitoring that very carefully. We're
6 still seeing a lot of infectious disease issues there,
7 more than we'd like, I speculate.

8 Next slide. Closer to home with shipboard
9 norovirus issues. That wasn't a cruise ship, CDC.
10 The vessel sanitation program was doing a lot of work
11 with that. Connie had a big outbreak in the Indian
12 ocean. That didn't make the news. They were way over
13 there. Didn't hear too much about it. Theodore
14 Roosevelt, just before Christmas had a big outbreak.
15 It didn't make CNN. The first time I saw it was on
16 CNN on some other ships. Essence has noted many
17 outbreaks across the United States. We've got a
18 Lieutenant Commander Scott Thornton who is out at
19 Pearl Harbor, has got an on-going study for shipboard
20 outbreaks like this.

21 Next slide, please. This is actually the
22 EPI curve for the outbreak. The star is when they
23 came in port. This was actually just before
24 Christmas. It hit big the day before they came in
25 port so they were still seeing a lot of sequelae.

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1 My personal best on the Forrestal 10 years ago was
2 155 one day. So they had a busy day with a big
3 outbreak that didn't have any more sequelae and
4 they're now deployed. They came back after Christmas.

5 Did their work out there in the Med. as of the first
6 of the week, but they had a pressing day.

7 Next slide. A little bit of an update on
8 medical event reporting. It was previously discussed
9 with the Armed Forces Epi Board. We wanted to look at
10 some in-patient records, tracking through the system.

11 This is operational forces, would be different. This
12 is MTF that we looked at this.

13 Next slide. If you just look at the data
14 flow process. SIDR in-patient data, kind of a gold
15 standard. There's 159 reportable events over the last
16 year. Fifty-three of them were found in the MTF, NDR
17 system. Thirty-six got to the NEPMU. Thirty-three
18 got to us. And 19 were of good enough information to
19 be able to get to AMSA. It's kind of a stair step
20 progression of data down. A lot of things we need to
21 do about that, but we wanted to at least look at that.

22 Next slide. There's some short term
23 things we're working on. We're trying to work towards
24 dual reporting, both in NEHC and EPMUS, providing
25 better feedback to the commands and some on-going

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1 training issues.

2 Bigger issues over the long term -- go to
3 the next slide there. If you think about the whole
4 process of why we're doing it as the medical reporting
5 system matures, we want to do some things differently.

6 In the operational world, NDRS or Navy Disease
7 Reporting System is embedded in SAMS now. It's 80.3
8 and it will mature up to 90.0 which will be a TNET
9 program. I don't think we're going to get anything
10 else out of that and it's probably going to have to
11 stay. For our MTFs and fixed facilities, I think
12 we're probably moving towards looking at SADR
13 information and a laboratory surveillance directly and
14 eliminate the middle man of NDRS and second entry of
15 the data. Better that way with CHCS I and II, ARS
16 Bridge and do something like an ESSENCE capability to
17 pop out our medical reportable events and have better
18 visibility of them.

19 Just a word on smallpox and anthrax. We
20 got the SERT teams done. Smallpox had a lot of
21 shipboard issues. People were very concerned about
22 that. We discussed that yesterday. CENTCOM has done
23 a lot of work with that. Reporting and education are
24 big topics. And the VAERS are being reported. We see
25 all the VAERS coming through NEHC right now. Those

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1 are being reported routinely now. We're seeing those.

2 That's all I've got subject to questions
3 from the Board.

4 DR. OSTROFF: Greg?

5 DR. GRAY: Captain Bohnker, thank you very
6 much and certainly you covered a lot of information
7 quickly.

8 The Group A strep pneumonia outbreaks
9 trouble me a bit and I know that the folks at the
10 hospital have suggested some increased surveillance
11 for carriage to try to get a better handle on carriage
12 and we haven't done that for a number of years. But
13 you may not know that but from 1940s to approximately
14 20 years later there was an organization at Great
15 Lakes called NAMRU IV and they extensively studied
16 Group A strep prophylaxis and they came to the
17 conclusion -- these were full-time researchers in
18 respiratory pathogens -- that the best strategy for
19 the scheduling of the benzothene was to delay it a bit
20 to Day 14. The concept of course is that the
21 benzothene and penicillin is only good for 21 to 30
22 days, so at MCRD San Diego, you have an 11-week plus
23 program and Ken can correct me, but I think they're
24 giving that first benzothene penicillin on Day 1 and
25 then if they followed up 30 days later, with the

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1 second dose that leaves quite a few weeks where
2 they're unprotected.

3 So just as a suggestion, you might want to
4 go back, review some of that NAMRU IV literature and
5 consider if what I'm suggesting is true giving that
6 first injection, delaying until about Day 14. For
7 some reason that seemed to eliminate the epidemics and
8 maximize the use of the benzothene. And that's the
9 way the old instruction used to be ready anyway.

10 CAPT. BOHNER: The instruction in
11 question needs to be rewritten, yes.

12 DR. GRAY: Well, anyway.

13 DR. OSTROFF: I'm curious. The MRSA is
14 sort of an new phenomenon. Obviously, it's, you know,
15 something that we're seeing now almost from one coast
16 to the other in a whole variety of different settings,
17 in prison settings. It's been extensively reporting
18 in California among men who have sex with men and it's
19 one of these phenomena with the more we start looking
20 at it, the more we seem to be finding.

21 But I haven't heard it being a problem
22 like this that you describe at Parris Island. And I'm
23 wondering if any of the other services are seeing that
24 in recruit settings as well. Do we have any
25 information about that?

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1 CAPT. SCHOR: This is Ken Schor. I have
2 not heard of other reports that come close to the
3 Parris Island experience last fall.

4 DR. OSTROFF: Yes. I would be surprised
5 if it's got any association at all with the
6 administration of bicillin. I mean this is a
7 phenomenon that we're seeing basically everywhere and
8 most other settings where we're having problems are
9 not administering bicillin, so I don't think that has
10 really anything to do with it.

11 What exactly is being done to try to
12 address the problem other than trying to enforce hand
13 washing?

14 CAPT. BOHNER: They're culturing more.
15 They're changing their antibiotics around and not
16 using amoxicillin kinds of drugs and they're just
17 providing surveillance, going through those issues and
18 it's going back down, and seeing where it's going.

19 CAPT. SCHOR: This is Ken Schor. You
20 know, exactly like Bruce said, they started working
21 back from the clinical cases to make sure that they
22 got the clinical care on line. There was some issues
23 with the infection control measures that were being
24 done and some issues with the antibiotics that were
25 being chosen to be used. There's an infectious

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1 disease consult provided.

2 Also, there's the folks from EPMU2
3 investigated it. Increasing general standards of
4 cleanliness and allowing, actually allowing the
5 recruits to actually take a shower and not to share
6 personal hygiene items like they appeared to be doing
7 and trying to get the drill instructors to recognize
8 that that was an inappropriate thing for them to be
9 doing.

10 Obviously, there's some other issues about
11 whether there should be an institution of a
12 hebicleanse shower at some point in the training. The
13 folks from EPMU did some extensive environmental and
14 other cultures of other personnel to look to see if
15 there was a carrier last summer and they could
16 discover nothing there. But there seemed to be a
17 spike right after the crucible in infections and that
18 crucible is the 3-day culmination event where hygiene
19 doesn't exist and they fed about one MRE in 72 hours.

20 There are some issues with overall hygiene that are
21 being addressed also, but then also walking back
22 further on issues of should all recruits be cultured,
23 what's the value of that, what's the value of things
24 like nuparacin prophylaxis of carriers, those sorts of
25 things.

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1 DR. GRAY: This is Greg Gray. Scott
2 Thornton, who I understand is deployed right now,
3 actually -- he's not? Anyway, he did extensive
4 studies at the SEAL training facility because they had
5 a similar problem some years ago. Meg maybe can jump
6 in. He did try nuparacin, and I'm not sure what the
7 result was, but he would be a good person to join in
8 this because he studied it for several years.

9 CAPT. BOHNER: Scott was in the loop.

10 DR. JONES: I'm having difficulty hearing.
11 This is Bruce Jones.

12 Can you hear me?

13 DR. OSTROFF: Yes, we can hear you.

14 DR. JONES: Great, that was better.

15 CDR. RYAN: Just to expand on what Captain
16 Gray said, the SEAL trainees, basic underwater diving
17 school trainees, did have an outbreak. They're much
18 smaller groups, a much smaller scale last summer and
19 they responded very aggressively with nuparacin nasal
20 treatment every third day for the entire cadre for
21 many weeks. Azithromicin prophylaxis for their hell
22 week phase which is their most extensive phase and the
23 hebicleanse showering and despite all of that it did
24 take some time for that MRSA outbreak to really settle
25 down.

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1 Scott Thornton's data does support that
2 the nuparacin nasal treatment seems to help, at least
3 in that setting, at least in the basic underwater
4 diving school. Students are different than basic
5 trainees.

6 Also to expand on what Captain Gray said,
7 I'm sorry, the Group A strep in San Diego, the
8 response currently out there is to do -- this is Group
9 A Strep, of course, and not MRSA, to do the antibiotic
10 prophylaxis which they've changed from being bicillin
11 or erythromycin to bicillin or azithromycin q week for
12 three weeks during the beginning at the point that
13 bicillin is given to penicillin-nonallergic people.
14 They're giving that at day zero and then every three
15 weeks for that 12 weeks of basic training so basically
16 4 antibiotic prophylaxis drills in those basic
17 trainees and they're doing that not so much in close
18 consultation with EPMU5 or NHRC, but with their
19 infectious disease folks at the hospital. That's a
20 teaching hospital with -- as opposed to Beaufort, a
21 fairly large infectious disease fellowship and cadre
22 of folks who have strong opinions about the Group A
23 strep response and are driving that and we've actually
24 been asking periodically about the plans for when that
25 might be tapered off or in response to what would they

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1 envision being the future of strep control at Marine
2 Corps Recruit Depot and potentially the future of the
3 strep instruction and so on. And have not really
4 gotten a clear understanding and it may be a wonderful
5 issue for this Board to comment on and the Navy
6 Epidemiology Board may really want to weigh in since
7 the two boot camps are a little bit different here in
8 control of Group A strep, for the Marines that is.

9 DR. OSTROFF: Thanks for that update. I
10 actually have another question. The Norwalk
11 outbreaks, I assume that there were thorough
12 epidemiologic investigations that were and was there
13 any particular risk factors that were identified that
14 were associated? Was it one part of the ship? Was it
15 everywhere?

16 CAPT. BOHNER: It was everywhere. They
17 did not do that good of an investigation on board the
18 TR because she was just coming back into port.
19 Basically, people got off that Friday and went and
20 talked to CNN before we even heard about it. So it
21 really came up very quickly. Trying to track people
22 down was actually hard because the air wings were back
23 ashore. On Connie in the IO they did a real big
24 workup trying to look for anything. All the other
25 warships in the battle group had some small outbreaks

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1 and they were concerned about that and they ran that
2 down, checked food, checked water, did all the usual
3 things and didn't find too much in that process.

4 DR. OSTROFF: What did they do in terms,
5 with the TR and with other -- with the Constellation?

6 What did they do in terms of that environmental -- I
7 mean with the cruise ships, for instance, they get
8 taken out of commission and they get sanitized from
9 one end to the other, etcetera, etcetera. Sometimes
10 it's been successful, sometimes it hasn't been
11 particularly successful. I would assume that it's
12 hard to do that with an aircraft carrier.

13 CAPT. BOHNER: I don't think there were
14 any specific plans to do any environmental sanitation.

15 Handwashing, trying to make sure there was plenty of
16 towels in the heads, thorough handwashing, encouraged
17 some of that, but there was no big effort to sanitize
18 the ship and all. It wouldn't have been possible on
19 the Connie because they were deployed in the IO. TR
20 just got back and let everybody off and so by then it
21 was gone. There was some concern it might come back.

22 We did send some samples of stool down to CDC to work
23 on that issue. We actually -- Scott Thornton has got
24 the study on Norwalk sent to the people at the
25 University of Cincinnati and it was positive for

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1 Norwalk agent that way, trying to serotype it and see
2 how it fit with everything else. That was still
3 pending when I left. Real impressive effect on a
4 ship. Huge impact.

5 DR. OSTROFF: Thanks. Bill?

6 DR. BERG: Bill Berg. A couple of
7 comments. Regarding the Group A strep, as the eminent
8 epidemiologist Casey Stengel said it's deja-vu all
9 over again. I mean every few years we go through this
10 and the prime factor often is that somebody is sort of
11 drifted away from the recommendation.

12 I also wanted to ask a couple of questions
13 about the MRSA outbreak. You talk about
14 osteomyelitis, deep Palmer space infections. That's
15 pretty serious stuff. Could part of this have been
16 perpetuated among the hospital staff, particularly in
17 the operating room and was any culturing done of the
18 training staff because somebody has to perpetuate this
19 organism from -- among the recruits?

20 CAPT. BOHNER: They did do a big culture.

21 EPMU2 went down and did a real big cross sample of
22 the whole place. Didn't find too much. Did a bunch
23 of environmental samples, people samples. One person
24 was positive, as I remember. Two environmental
25 samples, that was all and couldn't find any individual

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1 case at all. They looked hard for that and didn't
2 find anything. So we did not see that.

3 DR. OSTROFF: Yes, and I'll point out,
4 Bill, that the experience that we've had with other
5 MRSA community-acquired outbreaks is they get very
6 nasty in terms of the severity of the infections that
7 are seen. So this is not at all inconsistent with
8 what's been seen in most other MRSA community-acquired
9 outbreaks. It's unfortunate, really. It's very
10 difficult to deal with.

11 DR. BERG: In other words, they tend to be
12 very invasive.

13 DR. OSTROFF: Absolutely.

14 CAPT. SCHOR: This is Ken Schor. If I
15 could just correct perhaps, add some illustrations or
16 correction there. The concerns about the Palmer space
17 and some of the deeper infections were probably
18 somewhat overstated by the XO who was the hand surgeon
19 who raised the initial alarm.

20 What the team found were that these were
21 essentially knee, soft tissue infections, elbow
22 infections, things that get abraded when you're doing
23 combat crawl during various training maneuvers. So
24 they were not the kind of infections that initially
25 created the response.

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1 And also I know that the team did look at
2 clinic and other corpsmen that were supporting the
3 folks more in the field. To my knowledge, they did
4 not look specifically at the hospitals since the
5 feeling was the folks who were admitted with MRSA and
6 it was not being perpetuated as a nosocomial
7 infection.

8 DR. OSTROFF: Thanks very much. Why don't
9 we move on.

10 Jeff, are you on the line? I think that
11 we lost him. His presentation is actually in the
12 briefing book, so what we'll do at your leisure just
13 take a look at that and we'll have an update from Jeff
14 at the next meeting, hopefully face to face.

15 The other presentations are also not able
16 to get on, so I think what we will do is we'll make
17 some brief modifications to the agenda and have
18 Colonel Gibson spend a few minutes talking about an
19 update on the Recruit Assessment Program which is a
20 program that the Board has been highly interested in
21 over the last couple of years.

22 Roger, are you on the line?

23 LTC GIBSON: Yes, I'm on the line. Thank
24 you, sir.

25 DR. OSTROFF: Take it away.

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1 LTC GIBSON: Hello from Washington, D.C.
2 It's starting to get dark here and I'm sitting at home
3 with my fuzzy slippers on, so --

4 DR. OSTROFF: There are those of us who
5 think it's always dark in Washington.

6 (Laughter.)

7 LTC GIBSON: We'll go ahead and go to the
8 slides and skip the first slide, the opening one and
9 go to the background.

10 As you remember, we brought a question to
11 the Board a year ago at this meeting in San Diego.
12 The background for the question was the Institute of
13 Medicine has recommended a baseline health information
14 tool for recruits. That's also part of the PRD-5.
15 There had been some testing at recruit centers,
16 primarily at San Diego, done by Meg Ryan. Since that
17 time we've also been testing that in the Army at Fort
18 Jackson.

19 Questions that came to the Board were is
20 the Recruit Assessment Program an effective instrument
21 and is the RAP implementation feasible at all the DOD
22 centers? The Board came back with recommendations to
23 implement that it should be compatible with collecting
24 information for registry into CHCS-II and that the
25 CHCS-II should serve as the central repository for the

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1 RAP data.

2 And finally that the tri-service subgroup
3 should convene to finalize the transition from the
4 pilot program into a standard health care program.

5 We're on the slide that says actions and
6 plans to date. The recommendations from the AFE were
7 given to the services and health affairs as well as
8 the PMA, the tri-care management activity. I mention
9 them because they have control over the CHCS-II IMIT.

10 A tri-service subgroup was formed and they
11 met here a few months ago. If you remember at our
12 meeting in San Diego, there was a lot of disparity on
13 how the services were approaching the RAP and what we
14 tried to do with this subgroup meeting was to bring
15 everybody together and basically come up with a
16 consensus on how to move forward and make this
17 transition. A two-day meeting, a lot of discussion.
18 Came up with the concept of operations that mirrored
19 the Armed Forces Epi Board recommendations. I'll go
20 over a few parts of that. I don't have a copy of that
21 for you because it's still in coordination at the
22 present time. It hasn't -- it's not a finalized
23 product. But basically we would administer -- the
24 agreement was across the services to -- that we'd
25 administer before training begins, as soon as possible

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1 when a member begins active duty, his initial active
2 duty military training. And be administered in a
3 paper-based product that could then be scanned into a
4 local data base and forwarded for central collection.

5 A common format was to be used by all
6 services and all categories of new accessions. We
7 tried to make it compatible with other DOD health
8 survey tools and in particular the HER and HER III
9 which is the roll out, next version of that product.

10 Central collection is going to be in
11 CHCS-II and one of the big issues that we discussed at
12 this meeting was the fact that these data could not be
13 used pejoratively and that goes to part of another
14 issue that I'll discuss a little bit more in a few
15 minutes as actionable items.

16 There are several actionable items,
17 several of the questions within the RAP can have
18 actions associated with them and we wanted to make
19 sure that as these data were collected as a baseline
20 tool that none of those questions or none of the data
21 could be use pejoratively either to keep an individual
22 off of active duty or to be viewed as pejorative and
23 the approach to those, how the information is used by
24 either the line or health care provider.

25 We came up with the conclusion of a

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1 30-minute minimum for the completion of the tool as
2 it's finally developed and that would be for 90 --
3 that would mean 90 percent of the new accessions would
4 have to be able to complete the tool of the RAP within
5 a 30-minute period.

6 We found we needed a program office, a
7 central program office, certainly during the period of
8 time during the transition and potentially for future
9 iterations of the RAP as it goes forward.

10 I think we also agreed for periodic review
11 of the questionnaire over time.

12 I want to go back to actionable items for
13 a moment. The majority of the actions that can be
14 taken with the questions as we envisioned them would
15 be population based, rather than individual based.
16 The committee agreed or this work group agreed across
17 the services that none of the questions could be
18 immediately actionable. In other words, it would not
19 be something that you would -- that would require an
20 action within basic training for that individual.
21 There are some of these items that would require --
22 that may prompt a service member's provider, health
23 care provider to take action upon the answer to that
24 question, but only in the -- but only to confirm the
25 information and the actions would be done in a

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1 doctor/patient relationship. In other words, the RAP
2 data would drive the provider to ask the question, but
3 the actions taken would be at the patient level,
4 driven by the patient's answer as part of that
5 doctor/patient interaction. Two things of importance
6 from this meeting were the -- I just lost my slides,
7 hold on.

8 (Pause.)

9 The formation of the work groups. They
10 formed two work groups at the present time. One of
11 them to review the questions in the RAP and come up
12 with a final list of questions they'll be using.
13 We're comparing those questions primarily to the Tier
14 3 to ensure that we have compatibility between the two
15 products and allowing the services, through their
16 representatives on this work group, to bring
17 additional questions to the table which will then be
18 reviewed and we'll come up with a final product.

19 They look very similar to the RAP as it is
20 now, but we wanted to run through this process before
21 we finish. Once we've done that, once the questions
22 have been finalized, we'll map them into CHCS-II.
23 Some of those questions end up in the central data
24 base. Some will end up in the data warehouse within
25 the CHCS-II, but they'll all be available there.

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1 As you can see, the -- what the questions are will
2 drive the mapping, so that will follow up.

3 In between time we're requesting the
4 services to do a cost analysis for local
5 implementation. We will get the functional
6 requirements from the cost for the CHCS-II module
7 through the functional requirements process from the
8 mapping of the questions. And then we're also in the
9 process of developing a cost associated with a central
10 office for the RAP, basically looking at running about
11 two to three years as we implement this thing to
12 ensure that everything goes smoothly.

13 Our goal is complete policy, have a
14 product in front of Dr. Chew by the end of this fiscal
15 year for his signature and to begin the palming
16 process, keeping in mind that it will probably take
17 another year or two to get this thing palmed out
18 properly within -- across all the services. It doesn't
19 mean the services can't implement sooner than that, it
20 just means to get the funding in the right buckets per
21 se will probably take a couple of years.

22 We do have a couple of problem areas that
23 we're working with that have come up after
24 investigating this. Implementation at the recruit
25 centers is relatively straightforward at the basic

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1 training centers and at the academies.

2 Are we still there?

3 DR. OSTROFF: Yes, we're here.

4 LTC GIBSON: What we found though is that
5 some of the other officers' accessions are somewhat
6 problematic. We're working our way through that
7 process of figuring out how to do this, but Officer
8 Candidate Schools and ROTC, those folks that attend
9 those aren't really active duty at that time. We need
10 to be able to capture them basically as soon as they
11 come on active duty, but in some cases and in
12 particular the ROTC students don't go to a training or
13 in some cases don't go to any training immediately
14 following commissioning and we want to make sure we
15 capture that information as soon as possible.

16 We also have the individuals who have
17 prior service, who are then picked up for the
18 academies, etcetera and we need to address how we're
19 going to handle those individuals, how we can code
20 their data to ensure that for those individuals that
21 are sort of dogs and cats out there to ensure we know
22 where they came from so that we can take that into
23 consideration in the analysis.

24 The other problem is for some of these
25 individuals who don't fit into the academies and the

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1 recruiting centers, we need to ensure that we are
2 maintaining the privacy of the data as it's collected.

3 This is actually -- this can potentially be a problem
4 at the recruiting stations. I know down at San Diego
5 they basically hand these out during the in-
6 processing. They're completed during the first part
7 of training, but they're basically handed out by the
8 TIs and picked up and then scanned in. And we need to
9 ensure we have a policy in place that maintains the
10 privacy of that information as we move it through the
11 process.

12 That's basically it.

13 DR. OSTROFF: Thanks. Let me open it up.

14 I'm trying to recall who on the board wrote the --
15 was it you, Kevin, who wrote the --

16 DR. PATRICK: Yes, I worked with the
17 subgroup on that. This is Kevin Patrick and the
18 sounds like impressive progress. It's very
19 encouraging. And I do have a question and I think it
20 may well be embedded within this question review and
21 finalization, but in our recommendations, one thing we
22 wanted to assure was essentially the quality of the
23 data and that because this was a new sort of
24 conglomerated instrument that there be kind of an on-
25 going evaluation of psychometrics of this, that in

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1 fact, the questions that are being asked are valid and
2 reliable.

3 I know Meg had done some initial work on
4 response rates and things like that with her pilot
5 work down in San Diego, but what was -- were those
6 issues a topic of discussion when you first met with
7 your group?

8 LTC GIBSON: Yes, we talked -- I caught
9 most of what you said. Data quality was an issue that
10 was discussed as well as the validity of the
11 questions. One of the ways we're addressing the
12 validity of the questions is by -- at this review
13 process, the question review process that we're going
14 to complete. We have a product from Meg that provides
15 background information on where the questions came
16 from that are in the RAP and we have a similar product
17 for the HER and we're ensuring where, if possible,
18 that those questions came from validated surveys.

19 I actually have a spreadsheet that I'm
20 doing the final run on before I pass it out to the
21 work group members that provides all those, by domain,
22 in other words, smoking, demographics, etcetera. The
23 question of the RAP parallel with the question from
24 the HER and with the background information of where
25 those questions come from.

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1 Now with respect to validity testing per
2 se of in our population and with the issue of data
3 quality, two ways we're addressing that, one of them
4 is that at the local level where the individual
5 surveys are being scanned in, using the teleform tool
6 which appears as though it's going to be the way that
7 we'll get this done. There's a way to do some
8 validity testing and data quality, data entry
9 checking.

10 The other is with the Central Office.
11 Over time, we're going to have to take individual
12 questions once we get a database and we have gold
13 standard information for specific questions and do
14 some analysis as part of that. We envision doing some
15 of that through the Central Office.

16 DR. PATRICK: That's encouraging. Let me
17 just make a follow-up comment. I would encourage
18 continued attention to those issues. Really have that
19 as a separate agenda item as you move forward. In
20 part, the intent of the recommendation did include
21 this notion that sometimes a new questionnaire like
22 this is really more than just the sum of the parts, so
23 even though there's background information on where
24 the questions came from, when you constitute a new
25 questionnaire and administer it under different types

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1 of environments, it begs new questions about this.
2 And if the RAP is going to serve its intended purpose
3 of providing some really good solid baseline
4 information that will really be useful moving forward
5 for the types of studies that Meg and others have
6 talked about when this was discussed in our meeting in
7 San Diego, we will not regret investing more time and
8 effort in the quality of this data at this point.

9 Let me make one final comment. There was
10 an intent, I think it was at Great Lakes, some place
11 they were using electronic means of gathering
12 information. I would encourage your group to envision
13 that as not an if, but a when. At some point you will
14 probably want to move to administering this in
15 electronic form and I think to do that in a unified
16 sort of coherent, planned fashion to move away from
17 the paper-pencil and think of that as something that
18 would be in the future at a specific time horizon
19 might be something that you might plan for, so that it
20 can be done again consistently across the services.

21 I know many folks wanted to do that right
22 from the get go. They wanted to factor it in in some
23 way, but I don't think that's practical in most
24 settings, but it is highly unlikely that they will
25 want to administer this in a paper and pencil format

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1 indefinitely. So I would encourage your group to be
2 thinking about that.

3 LTC GIBSON: We certainly have thought
4 about that and part of this concept of operations was
5 to have a group that can address these sort of
6 questions over time and in particular the movement to
7 an electronic format.

8 Part of this entire package is the palming
9 process, the funding of it. Right now, most of the
10 services are not set up with the wherewithal to
11 electronically complete these forms. And so we're
12 going to start paper-based and be consistent across
13 the board, not only with the way we deliver, but the
14 questions themselves and as we move forward, we'll get
15 an opportunity to test electronic formats in
16 sub-populations, compare those data with what we're
17 getting from the paper-based product to see if we have
18 -- if there are changes associated with that and then
19 move progressively to an electronic format as we fund
20 this thing properly.

21 DR. OSTROFF: Thanks, Roger. I think we
22 have to move on since apparently we can't go beyond 5
23 p.m. and we have a couple more presentations yet to
24 go.

25 Our next presentation will be by Dr. Marc

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1 Zamorski of the Canadian Forces. Thank you.

2 DR. ZAMORSKI: Thank you, everybody. It's
3 a pleasure and an honor to be here. It's the first
4 time I've been down here to do this kind of
5 presentation.

6 I'm going to present some data, relatively
7 preliminary data on our findings from our follow-up
8 interview program we ran for our men and women who
9 came back from Afghanistan which was our Operation
10 APOLLO. This was about four to six months after they
11 returned. This was part of basically a legislative
12 mandate, more or less, and it was sort of imposed.
13 And my goal was to try to collect some useful
14 information through this process which wasn't terribly
15 well spelled out.

16 So I'm going to tell you exactly what we
17 did for the men and women and understand the initial
18 findings. All I have right now to share with you are
19 the members' evaluations of the process which I think
20 are more interesting than I would have thought going
21 into this and certainly were different from what I
22 would have expected.

23 I wish I could share with you the findings
24 of the instruments we administered, because I think
25 you will find them riveting, but they are so riveting

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1 that it's going to have to be presented back home
2 before I present it here.

3 (Laughter.)

4 Basically, we had the members complete a
5 survey booklet and this is again a clinical process.
6 This is an evaluating clinical process. It is not a
7 research project. And that's about 20 minutes.

8 We entered it into an Excel spreadsheet
9 that took about 5 minutes and that coded it and
10 produced a little report; a clinician reviewed the
11 report. It took about two minutes and they
12 interviewed the member which was sort of a
13 semi-structured interview which focused on initially
14 kind of individual health and adjustment issues and
15 then later a lot on family, social reintegration
16 issues.

17 The clinician made recommendations. This
18 is a screening process. It was meant to identify
19 people who may be having trouble following their
20 deployment and identified the majority of people who
21 did fine. And the member completed an evaluation form
22 after the interview.

23 The rest of this stuff I'm not going to go
24 through because I don't have the data on it at all.

25 We selected -- we really had to have a

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1 very small number of instruments to make this
2 clinically palatable and so we chose the SF-36. We
3 chose the PRIME-MD to look for mental health problems,
4 not necessarily the best epidemiological instrument,
5 but it's a good clinical tool that clinicians like.
6 And we used an abbreviated form of the Mississippi for
7 PTSD phenomenology.

8 So we have about 3,400 in our first
9 rotation. We have interviewed probably about 2,000
10 right now. And as you can see, largely men.
11 Relatively seasoned, perhaps, compared to American
12 deployed forces in terms of age and mainly NCOs,
13 mainly maritime forces in this particular group, but
14 spread out a bit and almost exclusively regular forces
15 rather than reserves. And they went over for about 6
16 months.

17 So the first question we asked was -- or
18 they were responding to was the logistics, scheduling,
19 waiting time, etcetera of the screening process was
20 satisfactory overall. And despite the fact that this
21 is the first time we'd done this and there were
22 definitely some glitches, as you can see, about 90
23 percent agreed or strongly agreed to that which I
24 thought was pretty good, given the complexity.

25 The next question was, my mental health

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1 was reviewed in appropriate detail. And this is where
2 I think it starts getting interesting, that as you can
3 see again, about 90 percent of people agreed or
4 strongly agreed to that and very few, perhaps about 5
5 percent or 6 percent disagreed. So people perceived
6 this to be relatively thorough.

7 Interestingly, although they didn't have a
8 clinician visit, they felt that about an equal number
9 felt that their physical health was reviewed in
10 appropriate detail. You might say why might this be?

11 The SF-36 has a lot of physical health questions and
12 the PRIME-MD has a whole sort of somatic symptoms
13 screen sort of thing so they felt that that was
14 thorough.

15 And I felt comfortable sharing personal
16 information with my interviewer. Now we thought that
17 -- number one, we thought people would not be invested
18 in this process. They would just kind of go there and
19 view it as some perfunctory thing they had to do and
20 they'd go yes sir, yes ma'am, yes ma'am, etcetera,
21 etcetera, without really providing useful information.

22 Or -- sorry, I'm pressing the wrong button.

23 Okay, but as you can see an interesting
24 feature. Ninety percent of people agreed or strongly
25 agreed that they felt that -- they felt comfortable

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1 sharing personal information with their interviewer
2 and about only 2 or 3 percent disagreed to that. I
3 was shocked by this. I mean this is going in their
4 medical record on pencil and paper, highly personal
5 details and they said that they felt comfortable with
6 it.

7 Incidentally, the commanding officers, in
8 general, not at the top, I think they viewed the
9 value, but sort of more of the top tier felt this
10 would be valueless, that the men and women wouldn't
11 want to go through, they wouldn't perceive it to be
12 useful, etcetera and it would just be a total waste of
13 time and they were wrong, basically. It was perceived
14 very well by the troops.

15 This is another one I thought was
16 interesting which is "by the end of the screening my
17 interviewer understood my current social situation."
18 And again, about 95, 96 percent agreed or strongly
19 agreed with that which again I think is pretty good.

20 "My interviewer provided me useful
21 guidance and/or advice." Here's where it starts
22 getting less favorable. About 80 percent agreed with
23 that, mostly those who were neutral and very few
24 disagreed with that.

25 And then "overall, this post-deployment

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1 screening process was helpful to me." Now this shows
2 about a 50 to 60 percent satisfaction rate in that
3 regard, but to some extent, you know, the majority of
4 people are doing fine and to expect them to rate this
5 as being tremendously valuable when they perceive
6 themselves to be fine, I mean the fact that it's that
7 high I think is pretty good.

8 And lastly, "I would have liked to have
9 seen a medical doctor as part of this post-deployment
10 screening" distinct from the post-deployment medical
11 they get immediately afterwards. Most people did not
12 want to see a physician as part of this process.

13 And so then we're interested in -- that
14 sort of dealt with the process we did -- I also wanted
15 to try to get at the idea well, maybe people thought
16 that the process would be good, but we really screwed
17 it up. So I tried to ask questions that distinguished
18 what we did from the general concept and as you can
19 see here, about 75 percent agreed that some sort of
20 post-deployment health screening should take place in
21 addition to the usual medical exam that occurs
22 immediately after deployment.

23 And of those who agreed or strongly
24 agreed, 75 percent or 77 percent of them thought that
25 it should be mandatory which is again a total shock.

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1 I did not expect this at all.

2 And when should the screening take place?

3 People preferred it closer to return, about half
4 saying less than two months post-deployment and most
5 of the rest saying three to six months
6 post-deployment.

7 This was, I think, probably one of the
8 more concerning things. The question here was -- or
9 the comment was "I'm concerned that medications,
10 vaccinations, chemicals or toxins that I was exposed
11 to in preparation for or during my deployment may have
12 harmed my health." And to me, 18 percent strongly
13 agreeing or agreeing is disappointing, given the
14 efforts that were put in in terms of risk
15 communication that were certainly much superior to
16 what we did in the Gulf and I think much superior to
17 what the Americans did in the Gulf, as I understand
18 that. And this is disappointing. The medical officer
19 who is a really sharp guy spent three hours in a
20 briefing with these people talking about these things
21 and having every single possible question answered.

22 And then we asked them what the specific
23 concerns were. These were people who identified any,
24 106. And they could identify more than one concern,
25 so they add up to more than 106. And by far the

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1 predominant one was the anti-malarials. And if you
2 look at the comments this looks like it was more
3 problems in theater. And the question, of course,
4 didn't distinguish between "it harmed my health in
5 theater" or "it's harming health right now" which is
6 unfortunate, but that was the way it was. But as you
7 can see, I think this is an opportunity for some risk
8 communication.

9 The other one that came up which was a bit
10 of a surprise was Permethrin, 11 out of well maybe 106
11 people, 11 indicated that. And then the rest were a
12 whole series of sort of obscure -- there were 23 other
13 agents that were listed by one person and
14 environmental agents, about 39 things totalled,
15 ranging from asbestos to Russian equipment to funky
16 green stuff that glows in the dark. I'm not making
17 that latter one up.

18 (Laughter.)

19 Which I suspect is antifreeze, but this
20 was interesting and one of the take home points here
21 for risk communication is that you can target anti-
22 malarials and you can target Permethrin, but this has
23 to be done very individually because the range of
24 people's concerns is huge and idiosyncratic and cannot
25 be predicted before they get into theater a lot of the

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1 stuff. I mean who thought that they would be exposed
2 to Russian equipment? I don't know.

3 Some people said old Russian equipment.
4 Some people described it profanely.

5 So the key findings are that this process
6 was very well accepted by Canadian Forces members.
7 And that it was, in general, perceived as being
8 thorough and valuable and almost all were satisfied
9 without a physician's visit which is pretty good news
10 because we dickered a lot as to whether we should have
11 a physician visit as well. And that 18 percent had
12 exposure concerns, largely surrounding anti-malarials.

13 And my contact information there is at the
14 very end. It's on the opposite side to the slide and
15 I'd be delighted to talk with anyone with similar
16 interests.

17 Are there any questions?

18 DR. OSTROFF: Thanks very much for a great
19 presentation. I must confess Canadians are so
20 accommodating sometimes. I'm not sure that their
21 colleagues south of the border would have been quite
22 so agreeable in terms of the filling out the
23 questionnaires.

24 Questions from the group? Did you have a
25 question, John?

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1 DR. HERBOLD: Yes. One thing. How are you
2 going to address in the future, differentiating
3 between concerns, pre-deployment and concerns as a
4 result of potential exposures in-theater? Is there a
5 way you can do that?

6 DR. ZAMORSKI: Well, I think I can split
7 the question into a few more. This was kind of our
8 first shot with this. We didn't have time to pilot
9 any of this stuff and I'm surprised, with one
10 exception, the instruments seemed to work relatively
11 well, the results were consistent and made sense. But
12 yes, I can just split it out and ask a little bit more
13 specifically what the level of concern was and when it
14 was and did it feel like they recovered from it or
15 not.

16 MS. CATTANI: I just had a question about
17 -- this is Jackie Cattani -- whether you had any
18 additional information on those that listed mefloquine
19 as one of the things that they -- did they elucidate
20 further like the funky green stuff or like what it was
21 that concerned them?

22 DR. ZAMORSKI: Yes, quite a bit. Some
23 people exceeded the 255 characters in the field that I
24 had allotted for. The main issues were side effects
25 in theater, nightmares, anger, sleep disturbance,

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1 headaches. Those were principally it. I don't think
2 anyone mentioned GI side effects, interestingly.

3 DR. OSTROFF: I'm curious, in Canada has
4 there been as much publicity concerning mefloquine as
5 there has been, say, in certain parts of Europe?

6 DR. ZAMORSKI: Yes. We're involved in a
7 class action lawsuit about it.

8 DR. OSTROFF: I mean that drives a lot of
9 it. There's a lot of information out there about this
10 particular drug and it wouldn't surprise me that you'd
11 get kind of feedback.

12 Other comments? Thank you very much.
13 Rick is insistent that we take a 5 minute break. So
14 we will go ahead and do that and then when we return,
15 we have our last series of presentations, so let's
16 make it 5 minutes and try to get back as quickly as
17 possible because we still have a fair amount of
18 information to get through.

19 (Whereupon, the proceedings went off the
20 record at 3:28 p.m. and went back on the record at
21 3:35 p.m.)

22 COL. RIDDLE: Okay, Bruce, I'm on your
23 first slide and just give me the cue and we'll run
24 through the slides.

25 DR. JONES: Okay, sounds good to me.

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1 Well, I'm very happy to be able to be here in some
2 form. I wish that I could have been at the meeting
3 itself. I hear the weather is considerably better out
4 there than it is here in Baltimore.

5 DR. OSTROFF: It is.

6 DR. JONES: What I'd like to do today is
7 talk to you about the roles of medical surveillance
8 research and also to a large extent the Armed Forces
9 Epidemiology Board in military injury prevention over
10 the last two decades. This will be primarily a
11 historical perspective.

12 Next slide. The topics that I'll talk to
13 you are outlined on this slide, starting with some
14 background and the reasons for concern, the 5-step
15 public health approach and how the process has evolved
16 not exactly in sequence with the 5 steps, but
17 nevertheless, in each one of the steps of the process.

18 I'll then talk to you about some of the
19 key medical research and the organizations involved
20 and the findings that were made in the 1980s and 1990s
21 that drew attention or more attention to injuries in
22 the military.

23 I'll then look at medical surveillance in
24 the 1990s and the key organizations and events there
25 and discuss data from some of those databases that was

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1 published in a couple of the reports that came out of
2 DOD work groups and AFEB work groups.

3 Then I'll talk to you a little bit about
4 surveillance and research in the military today, and
5 finally, draw some conclusions from those data and
6 talk about what I see as some of the future
7 directions.

8 I'll use primarily Army data because I'm
9 more familiar with that and also for the sake of time
10 because if I did it for all three services it would be
11 difficult, but I can tell you that much of the data
12 from the other services is very similar to what we see
13 for the Army.

14 Next slide. The concern with injuries has
15 arisen or been heightened because there's a growing
16 recognition that injuries are the leading cause of
17 death, disability and hospitalization for all of the
18 services and that they are a major cause, not just a
19 soldier's noneffective days, but also seamen, airmen
20 and Marines. And this is true during deployments and
21 combat, as well as garrison.

22 Next slide. Here we see the five steps of
23 the public health approach as applied to injury
24 control. The first step of the process is
25 surveillance. Surveillance is needed to know if there

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1 is a problem and if you identify a problem, how big is
2 it? This helps us to know where to allocate our
3 resources and how to set priorities.

4 Research is the next step because knowing
5 you have a problem is not enough. You really need to
6 know the causes and risk factors and that takes
7 research.

8 The next step in an ideal world is
9 intervention trials, to know what actually works to
10 prevent injuries. But the most important step of this
11 process is implementation of programs and policies.
12 And one of the things that we as scientists and
13 epidemiologists need to do is to get the information
14 from our research and our surveillance programs into
15 the hands of those who can act to implement programs
16 and policies.

17 Finally, once you have programs and
18 policies in place, that's really not enough because
19 you really need to know whether what you're doing is
20 effective, which requires evaluation of some form or
21 another.

22 Next slide. A brief summary of medical
23 research in the 1980s and 1990s. The focus of
24 military research during that time period in terms of
25 injuries was primarily physical training-related

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1 injuries, but the quality of the research was such
2 that it generated more interest in injuries and also
3 gave us hope that we could actually prevent them.

4 The key organizations involved in this
5 research was the Army Research Institute of
6 Environmental Medicine and the Naval Health Research
7 Center. And some of the key events were the formation
8 of an Army Surgeon General Task Force on training
9 injuries in 1985 and a Naval Health Research --

10 DR. OSTROFF: We're here, Bruce.

11 DR. JONES: You're still there, okay. And
12 a Naval Health Research Center Expert Panel on
13 Training Injury Prevention that resulted in an
14 important intervention trial in the mid-1990s.

15 Next slide. This slide shows you some --
16 actually the most consistent finding that we've had.
17 This was a study done at Fort Jackson in 1984. It's
18 now been duplicated probably a dozen times since then
19 and what you see along the horizontal axis are times
20 from fast to slow for quartiles or percentiles of mile
21 run time from the fastest quartile to the slowest.
22 And you see that the injury rates go up as run times
23 become slower from left to right.

24 Another very consistent finding in Army
25 and Marine recruits is that if you give them a survey

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1 asking them about their physical activity level prior
2 to entry into the service that those who are inactive
3 have significantly higher rates than those who are
4 very active. Here, we see that the inactive group had
5 a risk of 43 percent over the basic training cycle
6 versus 17 percent for the very active individuals.

7 Well, the Navy took this one step further
8 in a study of Marine recruits on the next slide here.

9 It reads "incidence of stress fractures in high risk
10 versus low risk Marine recruits." And what we see on
11 the left is the risk for the low risk group which was
12 2.4 percent and that group was defined as individuals
13 who came in with high levels of fitness as measured by
14 their initial entry physical training test and had
15 high activity levels as measured by a survey versus a
16 high risk group that had low fitness levels and low
17 activity levels prior to coming in. That high risk
18 group was at more than three times the risk of injury
19 as the low risk group, so the Naval Health Research
20 Center demonstrated that you could identify
21 constellations of risk factors that placed trainees at
22 greater risk.

23 These general principles probably applied
24 to other populations as well, certainly within the
25 military, but in particular basic trainees.

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1 This next slide, if you'll move on to --
2 this is now the ninth slide. We see here the effects
3 of running mileage on stress fracture incidents and
4 run times in Marine recruits. And what we see are
5 four groups, a control group -- the middle group is
6 sort of an intermediate group that was designed by
7 Marine Corps cadre and at the bottom a test set of
8 recommendations from the expert panel that I alluded
9 for the Civilian Expert Panel that I alluded to
10 earlier.

11 The primary recommendation was a reduction
12 in running mileage and we see that it is running
13 mileage over the 11-week period went down from 55 to
14 41 to 33 miles. Stress fracture incidence went down
15 from 3.7 to 2.7 to 1.7 percent, but on the far right
16 you can see that run times were basically the same for
17 all three groups, the control and the two test groups.

18 The control group, which ran more, ran three miles on
19 their final test in 20 minutes and 20 seconds and the
20 test group which did the lowest running mileage ran
21 20:53, so very negligible difference for a significant
22 reduction in injuries in terms of stress fractures.

23 This next slide just summarizes the
24 reductions they saw. There was a 50 percent reduction
25 in stress fracture incidents which equated to

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1 prevention of almost 15,000 lost training days and it
2 demonstrated cost savings of \$4.5 million a year at
3 one recruit depot. So very significant findings and
4 indicated that our research really was fruitful. We
5 found a number of other risk factors that were
6 significantly associated with risk. A couple of them
7 were surprises. We found that smoking cigarettes, the
8 more cigarettes you smoked, the more likely you were
9 to be injured. And another significant finding was
10 that flexibility was a double edged sword where both
11 the most flexible and least flexible individuals in
12 terms of hamstring or toe touching ability were at
13 greatest risk compared to the average group.

14 Moving on to the next slide, so in
15 summary, in terms of research in the 1980s and 1990s,
16 we made significant contributions to our understanding
17 of physical training and exercise-related injuries not
18 just for the military, but also in the civilian world
19 and had a number of very important publications. Also
20 notable were that the research programs were grossly
21 under-funded in comparison to the magnitude and
22 problem and also relatively under staffed. During
23 this time period, when we were going out, scrambling
24 for funds and looking at data bases that would
25 demonstrate how big the problem was, we developed a

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1 vision for the development of a routine systematic,
2 integrated medical surveillance system that would
3 allow us to assess the full magnitude of the problem
4 of injuries across the spectrum of health from deaths
5 to disabilities to hospitalization to out-patient
6 visits, so that we could acquire the priority
7 necessary to get the resources to actually address the
8 problem better.

9 And that leads me to the next slide, slide
10 12, on medical surveillance in the 1990s. I became
11 interested in surveillance because I felt that without
12 surveillance, we were not going to be able to generate
13 the interest in injuries that was really necessary to
14 tackle the problem.

15 A number of key events and organizations
16 were involved in this process in the 1990s. Among the
17 most important organizations were the Office of the
18 Assistant Secretary of Defense for Health Affairs and
19 the Office of the Deputy Under Secretary of Defense
20 for Environmental Security which housed the
21 Directorate of Occupational Health and Safety. Their
22 conjoined efforts in forming DOD level work groups
23 including an AFEB work group were instrumental in
24 making injuries a priority.

25 I also highlight the Army Center for

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1 Health Promotion and Preventive Medicine because they
2 established the Army Medical Surveillance Activity and
3 I'll tell you more about the importance of that in a
4 little bit.

5 Anyway, key events were establishment of a
6 DOD Injury Surveillance and Prevention Work Group
7 under the DOD Environmental Security in 1990 and the
8 formation of an AFEB Injury Control Work Group in
9 1994.

10 The objectives of both of those work
11 groups were to assess the data supporting the injury
12 control process and to valuate its value for future
13 injury prevention. Also, as I mentioned earlier, the
14 Army Medical Surveillance Activity was established in
15 1994 and because of their successful integration of
16 health data with personnel data across the spectrum of
17 health, that agency became the executive agent for the
18 Department of Defense for the Defense Medical
19 Surveillance System, and that occurred in 1997.

20 Now what I'd like to do is shift gears a
21 little bit and go into the next slide and talk to you
22 about the magnitude of the problem and I'll illustrate
23 that with data extracted from the Atlas of Injuries
24 published in Military Medicine in 1999. I'll use Army
25 data, but we had similar data for all of the services.

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1 The first data slide here, the next slide
2 which is 14, shows deaths in the Army in 1994.

3 Forty-eight percent of deaths were due to accidental
4 injuries; another 18 percent due to suicide; and 9
5 percent due to homicide. So in total, injuries caused
6 over 75 percent of deaths in that year. And that was
7 very typical for all of the services. I believe the
8 injury-related deaths were somewhat lower in the Air
9 Force, but still higher than all the other categories.

10 The next slide, titled "Disabilities in
11 the Army", we see the top line, orthopedic conditions,
12 which were largely the result of injuries, accounted
13 for 53 percent of disability discharges in the Army in
14 1994. The second leading cause was mental illness at
15 14 percent.

16 If we go to the next slide, we see in this
17 pie chart data on Army hospitalizations in 1994 and
18 musculoskeletal -- injury-related musculoskeletal
19 conditions, a category of the ICD-9 code book, one of
20 the principal diagnostic groups and in the services,
21 this is 85 or 90 percent injury-related. Twenty
22 percent of all hospitalizations were due to
23 musculoskeletal conditions. Another 11 percent due to
24 injuries and poisoning which were mostly injuries. So
25 total of about 31 percent of hospitalizations were due

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1 to injury-related conditions, compared to the next
2 leading group which was digestive diseases at 13
3 percent. Again, clearly, a very big problem.

4 We also looked at some historical data in
5 putting these reports together. There wasn't a lot
6 that we could look at. Here we see data on
7 hospitalizations among Marines from 1965 to 1970 and
8 of the almost 200,000 hospitalizations, the leading
9 cause was infection and accidents at 21 percent or
10 injuries and accidents at 21 percent, followed by
11 infectious diseases at 16 percent. But I would point
12 out that over here on the left another 8 percent of
13 hospitalizations were due to musculoskeletal
14 conditions and those were largely the sequelae of
15 injuries, the late, recurrent or chronic effects of
16 injuries. So we have a total of 29 percent of Marine
17 hospitalizations during Vietnam from the theater of
18 operations were due to injuries.

19 But that was really small compared to what
20 we see in this slide here. Now you have to keep in
21 mind that in the 1980s and 1990s we did not have
22 outpatient surveillance. There was no central source
23 of outpatient data such as we have now. But repeated
24 studies showed, as we see in data from infantry
25 soldiers at Fort Drum that the incidence of outpatient

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1 visit rates was much higher for injuries than for
2 illnesses. Here we see 19 percent of soldiers per
3 month having injury visits versus 12 percent per month
4 for illnesses. So 51 percent of injury visits were
5 due to injuries, but even more importantly, when we
6 look at limited duty there were 113 days of limited
7 duty per month due to injuries in this population
8 versus 11 for illnesses. So 91 percent of limited
9 duty days were due to injury and I'll contend that
10 this impact as measured by outpatient visits is
11 probably the most important aspect of injuries because
12 many of these are serious and I'll talk to you more
13 about that later.

14 Anyway, we used data such as you saw here
15 to draw injury pyramids for all of the services and in
16 the Army in 1994, we found that for every death, there
17 were 15 disabilities, 60 hospitalizations for injury
18 and over 1100 sick call visits. In that year, there
19 were more than 400,000 sick call visits and we knew
20 that this was an underestimate at that time. And
21 you'll see just how much later.

22 Now as I mentioned earlier in the public
23 health model that it's not enough to know that you
24 have a problem. You really need to know the causes.
25 You've seen some of the causes and risk factors in

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1 relation to physical training injuries. We also have
2 other data bases. This is a slide very similar to one
3 that Professor Baker has in her slide set. It just
4 shows that the Safety Center and our hospitalization
5 data give us an idea of what the major causes of
6 injuries are.

7 In 1994, at the Safety Center, data showed
8 that 17 percent of the 4,000 accidents reported were
9 due to privately operated vehicle crashes. The second
10 leading cause was sports at 14 percent and combat
11 soldiering activities at 11 percent. In-patient
12 hospitalization data showed us that sports were the
13 leading cause of hospitalization, followed by motor
14 vehicle crashes at 16 percent and falls and jumps, 11
15 percent and these were not parachute jumps, but just
16 jumping from objects near the earth.

17 (Laughter.)

18 Anyway, so some similarity in the data and
19 so it illustrates that we do have sources of
20 information about causation that could be helpful in
21 prevention.

22 What I'd like to do now is show you some
23 of the greatest successes that the military and
24 actually the civilian community have had. So if we
25 move to the 23rd slide titled "Army Motor Vehicle

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1 Fatalities" this is data for fiscal years 1980 to
2 1994. We can see that privately-owned vehicle crashes
3 went down significantly and these rates went down at
4 the same or steeper decline in the civilian community
5 from about 40 fatal crashes per 100,000 soldiers in
6 1980 to about 20 per 100,000 in 1994.

7 We had similar success -- it's a little
8 hard to appreciate that here with military vehicles,
9 but military vehicle fatality rates went down from
10 about 6 per 100,000 in 1980 to about 2 or 3 in 1994
11 with the exception of 1991 and that's the effect of
12 Operation Desert Shield/Desert Storm now known as the
13 Gulf War. And interestingly, you see a commensurate
14 decrease in POV crashes in 1991 as the military
15 vehicle crash rates went up. So these are a problem.

16 Vehicular crashes are a problem not just in peace
17 time but also during conflict.

18 The next slide shows us the tremendous
19 success that the Navy has had in preventing aviation
20 fatalities. Those fatalities have decreased from
21 about 55 per 100,000 flight hours down to 3 or 4 in
22 1995. And innovations in carrier decks and safety
23 programs have accounted for those. Military aviation
24 in the Air Force and also in the Army where rotary
25 wing aircraft have significantly decreased over the

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1 past 25 or 30 years. So we can document successes.

2 The importance of these successes are
3 shown in the next slide entitled "The Components of
4 Prevention Successes." And two things are very
5 important. One, we had clear targets with outcomes
6 that were recognized as important and we had good data
7 for tracking and monitoring them. Another factor was
8 that leadership took an interest, that there was
9 command interest all the way to the top of all of the
10 services and those, I think, are the kinds of things
11 that we need if we're going to prevent other injuries
12 as well.

13 Next slide. This one just summarizes the
14 results of surveillance efforts in the 1990s. The DOD
15 Injury Surveillance and Prevention Work Group really
16 it took from 1992 to 1995 to compile all of the data.

17 We had a 692 page Atlas of Injuries that looked at
18 all of the major sources for all of the services and
19 we met about three or four times a year, in that time
20 period.

21 The Armed Forces Epidemiology Work Group
22 reviewed the data compiled by the DOD Work Group
23 between 1994 and 1995 and in 1996 published a
24 technical report which resulted in a memorandum from
25 the Assistant Secretary of Defense for Health Affairs

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1 to the Surgeon Generals of the services, requesting
2 that they implement the recommendations of that
3 report.

4 The DOD Injury Work Group published the
5 Atlas of Injuries in Military Medicine in 1999 and the
6 AFEB report was published as a supplement to the
7 American Journal of Preventive Medicine in 2000. And
8 I would contend that those publications were very
9 important and illustrate a big need of the services
10 and that is to get our best data published because it
11 not only gave us credibility, but it also gave
12 durability to the findings because if those had just
13 been technical reports they would have been lost by
14 now. But now whenever someone searches on this, they
15 find those reports and those were true group efforts
16 that involved dozens of individuals from all of the
17 services. I think we all took some pride in it and
18 that also helped to disseminate the results.

19 Anyway, some of the key recommendations of
20 those work groups were that we develop a comprehensive
21 integrated medical surveillance system which has
22 become a reality. I think as Colonel Rubertone
23 probably told you this morning the Defense Medical
24 Surveillance System is likely to become a DOD agency
25 very soon and I think that's very important.

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1 And also I think if we're going to have
2 the research which is the necessary foundation for
3 prevention, we need to look at our surveillance data
4 to set priorities. Professor Baker will talk more
5 about that in her presentation.

6 Moving on, I'd like to just talk briefly
7 about surveillance and research today. Today, we have
8 an integrated medical surveillance system, a
9 tri-service system that integrates ambulatory,
10 hospitalization and fatality data among other things
11 and links it with personnel and demographic data which
12 is updated on a monthly basis.

13 There's on-line access to aggregate data
14 from that system through the Defense Medical
15 Epidemiology database. Also, the Army Medical
16 Surveillance Activity publishes a monthly installation
17 injury report on-line that is tri-service so you can
18 look up major installations for all of the services.
19 They publish a monthly -- a medical surveillance
20 monthly report that deals not just with injuries but
21 other health problems, but more and more
22 injury-related information is published in that.

23 Also, I think it's very significant that
24 last year the Secretary of Defense made injuries a top
25 prevention priority for all of the services with the

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1 goal of a 50-percent reduction of injury rates over
2 the next 5 years. A Military Injury Metrics Work
3 Group was chartered and has made a recommendation for
4 the metrics that could be used to follow that. So
5 really, some very significant events that I think was
6 generated largely through work done by members of the
7 Armed Forces Epidemiology Board in conjunction with
8 the DOD Work Group.

9 To illustrate the type of data that's
10 readily available on-line, you know, and this is
11 outpatient data. The next slide is titled "Injuries
12 versus Illnesses Resulting in Outpatient Visits Among
13 Soldiers." This slide I show because as I said
14 earlier I think that for injuries, the base of the
15 pyramid is so broad and the injuries treated on an
16 outpatient basis are of such severity, many of them,
17 that this is probably the most important data that we
18 have and for injuries, in particular, it is very
19 important to be able to track rates over time and
20 between units and the outpatient data is robust enough
21 to do that. Anyway, what you see over on the right is
22 that injuries of musculoskeletal -- injury-related
23 musculoskeletal conditions.

24 Are we still hooked up?

25 DR. OSTROFF: We are. This happened

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1 earlier in the day as well.

2 DR. JONES: I am hearing some music in the
3 background.

4 DR. OSTROFF: Yes.

5 DR. JONES: Can you hear me adequately?

6 COL. RIDDLE: Yes, somebody probably put
7 their phone on mute or hold and it's got built-in
8 music.

9 DR. JONES: Anyway, what you see on the
10 right is that injury and injury-related
11 musculoskeletal conditions in 2001 accounted for over
12 33 percent of all outpatient visits. The second
13 leading category was noninjury-related musculoskeletal
14 conditions at 10 percent and then mental illnesses at
15 10 percent.

16 There were over 900,000 injury visits in
17 that year, but it should be noted that of those visits
18 there were at least 28,000 visits for lower extremity
19 fractures, femur fractures, tibial fractures, that
20 sort of stuff. There were almost 29,000 visits for
21 upper extremity fractures and there were around 40,000
22 visits for torn cartilage and torn ligaments of the
23 knee. So these are not really trivial injuries.
24 There are a lot of them that are very serious, but are
25 nevertheless treated on an outpatient basis in the

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1 services now.

2 We look at the next slide titled "FY02
3 Army Injury Rates Per 1000 Soldiers." This is an
4 extract from the installation injury report that's
5 published monthly and what that report shows is you
6 can look at any of the major posts. Here we see Fort
7 Jackson, the red line compared to the Army rates
8 overall, the yellow triangles and we can pull up data
9 like this for almost any post. Fort Jackson happens
10 to be a basic training post and so the injury rates
11 seen there are higher than the Army as a whole and
12 that's typically what we expect. They are about 30 or
13 40 percent higher generally and sometimes even more
14 than that, depending upon the post.

15 The next slide titled "Victory Fitness
16 Intervention Trial" is an illustration of one of our
17 recent successes. It's very similar to the results
18 that you saw from the Marine Corps study done by the
19 Naval Health Research Center earlier. They introduced
20 an intervention trial to reduce training-related
21 injuries, mostly through reductions in running and
22 they showed a significant reduction in overuse injury
23 rates for the intervention compared to the control
24 group. There was virtually no difference in traumatic
25 injury risk which is what we would expect because

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1 those have different causes than the training-related
2 overuse injuries and even though they reduced the
3 amount of running, the pass rates on the physical
4 training tests were actually significantly higher, 85
5 percent versus 80 percent for the intervention trial
6 versus the control group.

7 So that research has paid off. It will
8 probably end up being implemented by the Training and
9 Doctrine Command who trains all of our trainees among
10 others in the next few months.

11 This next slide is simply an alphabetical
12 list of external causes of injuries, major causes of
13 injuries, the top 25 injuries and it's intended to
14 illustrate how diverse and how complex the problem of
15 injuries is and to make the point that if we're really
16 going to make systematic headway in preventing these
17 injuries, we really need a systematic approach
18 starting with having a set of criteria for
19 establishing our priorities and Susan Baker will talk
20 more about that in her presentation.

21 Winding down now, I think some of the
22 conclusions that we can draw about military injury
23 prevention are that current interest levels in
24 injuries have been driven by data. Part of that has
25 been that we've been able to provide a context for

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1 seeing how important injuries are compared to other
2 disease problems for the military.

3 We also have some notable successes in
4 prevention of vehicular crashes and aviation deaths
5 that required surveillance as a key element of being
6 able to do that and what I would submit to you is that
7 we need to do that with other injuries.

8 Also, committees and work groups were
9 extremely important in this process and the AFEB, in
10 particular, provided an external source of validation
11 that was invaluable in this process. I also think
12 that from what you've seen, you can conclude as well
13 as me that the surveillance tools available today are
14 much more powerful than they were even a decade ago.

15 Another thing I think is fair to say,
16 although you didn't see data on it is that research on
17 injuries is still grossly underfunded compared to the
18 magnitude of the problem, but there is hope. The
19 physical training related injury research over the
20 last decade, decade and a half demonstrates the
21 potential to make a difference through a systematic
22 research program and I think we're very indebted to
23 the Army Research Institute of Environmental Medicine
24 and the Naval Health Research Center for doing that.

25 This next slide, "Progress of the Five

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1 Step Public Health Approach" I'd like to skip for the
2 sake of time and just move on to the next slide which
3 are what I think some of the key future directions
4 are. We need to establish a systematic approach of
5 injury prevention starting with the second bullet here
6 which is setting prevention in policy priorities based
7 on the magnitude of problems that were confronted with
8 in the services and our ability to prevent the
9 problems and to use public health criteria to set
10 those priorities.

11 To the extent possible, we need to
12 implement off-the-shelf solutions. We need to make
13 recommendations for prevention programs and policies
14 that are evidence-based. And it would be helpful and
15 for the Army we've started doing an inventory and
16 started cataloging the methods of prevention that have
17 been demonstrated to be effective. Once we've
18 implemented programs, again, I'd like to reiterate
19 that we need to track and evaluate the effectiveness
20 of our prevention efforts.

21 And finally, we need to have a health
22 research program and we need to set our priorities
23 using the public health criteria to identify and focus
24 our resources in an efficient manner on the biggest,
25 most preventable or likely to be preventable problems.

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1 With that, I'd like to conclude and turn
2 it over to Susan Baker.

3 DR. OSTROFF: Thanks very much. Would you
4 like to hold questions until Professor Baker is
5 finished with her presentation?

6 DR. JONES: I'll leave that to your
7 discretion, but my information would be that it might
8 be more fruitful to wait until after she's finished to
9 ask questions.

10 DR. OSTROFF: Go ahead, the floor is
11 yours.

12 PROF. BAKER: Okay, are my slides on?

13 DR. OSTROFF: Yes.

14 PROF. BAKER: I'm going to be talking
15 about a process of prioritization that has been
16 stimulated and very much disseminated by Bruce Jones
17 and his team and very much involved with them.

18 The first of my slides that pose, in terms
19 of the injury -- Now Bruce has pointed out the
20 importance of injury relative to illness and here, if
21 we looked at within the injuries constellation, as far
22 as the numbers of injury deaths in 2001, I find the
23 largest number from motor vehicles. These were
24 predominant privately-operated motor vehicles. With
25 suicide, homicide, nonmotor vehicle transportation

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1 being the next most important.

2 These are deaths -- let's skip the next
3 slide and go on to hospitalizations, where we see a
4 much larger group of injuries. We see falls and
5 miscellaneous being prominent. Miscellaneous is such
6 a large group, however, that falls by themselves might
7 not come out as being on top, rather land transport
8 and sports being more important; air transport,
9 machinery and tools. These are all hospital -- this
10 is -- these are representing almost 4,000 hospitalized
11 injuries in the Army in a single year.

12 In the next slide we're looking at
13 outpatient visits, which as Bruce has pointed out are
14 a tremendously important cause of lost strength, lost
15 days. Physical training being the most important
16 cause of outpatient visits, with sports being second,
17 field training, motor pool and so on as we go over.
18 But time and again we have seen that physical training
19 and sports are extremely important.

20 Now, things are going to differ from one
21 installation to another. On the installations, there
22 are installation injury reports and we show you here
23 data of three of them and in terms of the percentage
24 of serious injuries, which means basically
25 hospitalizations from falls and miscellaneous is not

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1 very different. The largest differences you see are
2 in athletics and especially in air transport where
3 these are primarily parachuting injuries that are so
4 prominent at Fort Bragg. The Army, as a whole, 9
5 percent of all hospitalizations are being for
6 parachuting injuries whereas it's 34 percent at Fort
7 Bragg.

8 The next slide introduces you to the
9 process that we used at Johns Hopkins in collaboration
10 with the Center for Health Promotion and Preventive
11 Medicine to prioritize where should we start as far as
12 in a systematic review of the -- whatever information
13 we have of effective preventive methods.

14 We had a meeting all day that involved 20
15 military and civilian experts where we looked at data
16 such as the -- what I've just shown you on these
17 hospitalizations, clinic visits and so on and talked
18 about what would we use as the basis for prioritizing
19 them. These shows you the list of 25 different
20 causes. Well, how do you figure out where you're
21 going to start?

22 We suggested a lot of reasons. These were
23 then grouped into four different criteria and 11
24 participants, based on the 4 criteria that I'm about
25 to explain, went over these 25 causes and gave them a

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1 score.

2 Next slide. On criteria for
3 prioritizing injury, there were four criteria. One
4 of them being the importance of the problem, how big
5 is it, how severe, how many injuries do you have, how
6 much lost time are they causing, how much loss in
7 readiness?

8 The high cost of the problem, as far as
9 retraining or replacing personnel, the size of the
10 population at risk, the vulnerability of the people.
11 And the degree of concern because you've got to take
12 into consideration there are some things that people
13 may not be very much concerned about whereas the
14 really high visibility things that can contribute to
15 the importance of the problems.

16 Another criterion was preventability. Now
17 probably --

18 OPERATOR: Now exiting.

19 PROF. BAKER: Hello? Are you there?

20 DR. JONES: They're still there, Sue.

21 COL. RIDDLE: We're here.

22 PROF. BAKER: Many problems may be
23 preventable, but some are more preventable than
24 others. So one looks for places where there are
25 modifiable risk factors, other individual risk factors

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1 or environmental factors or things that can be changed
2 where there are identifiable causes for injuries. And
3 our proven prevention strategies or strategies that
4 could be designed, where there is some reasonable
5 chance of developing strategies that would prevent
6 injury.

7 The third criterion was the feasibility of
8 prevention. Is the infrastructure strong enough to
9 support the efforts? What are our resources,
10 including financial resources because there are some
11 preventive strategies that may be so costly as to be
12 virtually out of sight. Are the influence of off-post
13 activities, driving off post and so on, maybe the
14 feasibility is less in terms of military prevention of
15 these injuries? Whether the activity is actually
16 required or essential to mission, those certainly
17 count for something. Whether the preventive actions
18 are acceptable, in general, are they politically,
19 culturally. And whether there is accountability or
20 responsibility that can be assigned. The fourth and
21 last criterion was that of evaluation. It's important
22 to know whether the benefits are likely to outweigh
23 the costs of implementation and whether there is the
24 capability of evaluating the preventive efforts.

25 Next slide shows our scoring system which

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1 was pretty simple. We gave 10 points each to the
2 first three criteria, importance, preventability, and
3 feasibility; 5 points to evaluation so that each of
4 the injury-producing activities could get a score of
5 as many as 35 points from each of the 11 people with
6 the potential high score of 385. The actual range of
7 scores was from 91 to 280.

8 The next slide shows that the greatest,
9 highest score was for physical training and next for
10 privately-owned vehicles and then athletics of sports,
11 excessive heat, military vehicles and so on on down
12 the line, and the following slide shows everything
13 down to the 25th, which was nonmilitary air transport.

14 In other words, people flying either commercially or
15 flying general aviation, private flying got the lowest
16 priority in terms of what our next activity was going
17 to be.

18 There are a lot of things that influenced
19 our choice of what we were going to focus on
20 initially. Falls are certainly important, but they
21 occur in such an enormously diverse manner. These
22 were the mechanisms of falling injuries at Fort Riley.

23 I highlighted some that seemed to be, suggest more
24 than the others, possible preventive measures. For
25 example, falling from cargo trucks, jumping from

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1 trucks. We know that many trucks used by the military
2 don't have good steps for people to either get onto to
3 the vehicle or to get out of the vehicle. Jumping out
4 of two and a half ton trucks has been noted as an
5 important cause of injury in the Gulf and falls from
6 trucks, while it was only one case here, may point to
7 something that could be preventable. But as I say,
8 the real diversity of falls, led us to think of some
9 of the other high-ranking things.

10 The number one priority from voting was
11 physical training, but as Bruce pointed out this has
12 been an area where there has been an enormous amount
13 of emphasis and research and movement and improvement
14 already. The second most important was privately
15 owned vehicles and here -- well, primarily because the
16 Army Safety Center is focusing on those. The third
17 area is that of sports. And we chose athletic
18 injuries to focus on first for a number of reasons.
19 Obviously, they have tremendous impact on the
20 operational readiness of the military because it being
21 the third leading cause of hospitalization among men
22 in the Army, almost that important among women. The
23 third cause of hospitalization in Desert Shield/Desert
24 Storm, people think of wartime battle injuries, yet
25 it's the nonbattle injuries and including those from

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1 athletics that are so tremendously important.

2 Another reason that I haven't mentioned on
3 the slides, I think one reason to focus on these is
4 not only that they're important, but they are
5 typically neglected because people think of sports as
6 being not important enough, not military enough
7 perhaps to deserve attention and yet if you look at
8 the impact on readiness they are extremely important.

9 As the next slide indicates, they
10 generally involve physical exertion, physical contact,
11 quick decisions, fast action. That's a real recipe
12 for the chances of injury.

13 If you look at -- we were able to because
14 of some work done a few years ago by Tammy Lauder and
15 others, analyzing the hospitalizations for sports
16 injuries, we did it for both males and females, but
17 I'm showing here the data for males. Basketball and
18 football were the two highest. Skiing was next.
19 Softball slightly behind skiing. If one looked at
20 Safety Center data in the next slide you see
21 basketball, football and softball again, skiing --
22 softball tying with skiing.

23 We have chosen to look specifically at
24 basketball, football and softball because of their
25 importance and because of the potential for prevention

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1 through measures that could be taken in the military,
2 more so than, for example, with skiing.

3 And we are now initiating a major effort
4 to review all of the studies that have been done
5 related to basketball, football and softball to
6 identify preventive measures that have been generally
7 shown through good research to be effective so that we
8 can have some basis for saying these would be good
9 places for the Army to make sure that preventive
10 measures either are in place or are going to be in
11 place.

12 On that research, we found out that 40
13 percent or more of the hospitalizations from softball
14 and basketball were injuries to the knee or the
15 ankles. These are very disabling injuries and very
16 important. We will be looking, for example, in our
17 lit reviews for preventive measures for preventing
18 injuries to the knee and the ankle.

19 The next slide indicates that after --
20 having once established the priorities, we are now
21 reviewing the literature systematically, looking at
22 these three sports to identify successful preventive
23 measures and to determine gaps in the research that,
24 perhaps, the Army could also be addressing.

25 One of the things we will eventually be

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1 doing is looking at the details of the injury
2 circumstances because these are very relevant, of
3 course, to preventive measures.

4 Some time ago I looked at the injuries
5 that had occurred in the Air Force in the Gulf. Ankle
6 fractures were very prominent. Many of them had
7 occurred when basketball players had landed on some
8 sort of a rough surface, landed on stone occurred many
9 times or landed on something in a hole.

10 There are implications here for prevention
11 because it would certainly be possible when packing up
12 everything else that goes with deployment to put in
13 some sort of a portable playing court that had a
14 surface that was going to be free of stone. People
15 are going to, thank goodness, engage in sports even
16 when they are in war zones. They're not going to be
17 fighting all the time. They will be involved in
18 sporting activities, setting up some sort of ad hoc
19 places to play, and let's at least give them a decent
20 surface.

21 I'd like to skip the next three slides and
22 end up with the one that says "Military Commanders"
23 because in the final analysis the buck stops there.
24 They're going to be getting the data on injuries in
25 their units. They must recognize, they must be

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1 accountable, they have to realize that they're
2 accountable for injury prevention in their units. By
3 being accountable, this doesn't mean just saying well,
4 yes, we've got higher rates because we do a lot of the
5 training here. Or we've got higher rates because
6 we've got people jumping out of airplanes. The fact
7 that one can explain higher rates doesn't mean that
8 you can't look at the causes of those injuries and do
9 something about them.

10 If a unit has lower rates, they can't sit
11 back and say oh, good. We're 20 percent below the
12 Army average. I guess we're doing pretty well. It's
13 still possible for them to look at the specific ways
14 in which injuries are occurring in those units and do
15 something about it.

16 I guess my final emphasis is that non-
17 battle injuries in wartime are so important that they
18 need to be taken into account as we are shipping our
19 people right now overseas, preparing them and
20 everything that goes with them for overseas duty,
21 thinking about the importance of injury prevention, if
22 we're going to have the military readiness that is
23 needed.

24 Thank you.

25 DR. OSTROFF: Thanks for two excellent

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1 presentations. Let me open it up to the Board Members
2 for any questions or comments that they may have.

3 DR. RUNYON: This is Carol Runyon. I have
4 a question over the phone.

5 DR. OSTROFF: Go ahead.

6 DR. RUNYON: Can you hear me?

7 DR. OSTROFF: Yes.

8 DR. RUNYON: Okay, I was curious, each of
9 you mentioned in somewhat different ways the issue of
10 infrastructure to accomplish the goals that you're
11 outlining and I'm just wondering if you could comment
12 on if there are any specific recommendations for
13 improving the infrastructure to make these
14 recommendations happen?

15 PROF. BAKER: Oh, Bruce, take that one.

16 DR. JONES: I think probably the most
17 significant infrastructure need is really for a more
18 robust military research activity to look at the more
19 militarily unique injuries. That's the biggest
20 infrastructure problem.

21 I think the very nature of the military
22 lends itself to injury prevention because there's a
23 hierarchical structure, but the change that needs to
24 take place, I think, is the one that Sue mentioned
25 near the end of her presentation, and that was

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1 accountability. Commanders need to be accountable and
2 to do that we need to have mechanisms for providing
3 Commanders at successive levels of authority with the
4 information to see what's happening in their
5 subordinate units, and that's beginning to happen.
6 The potential exists to do that through the Defense
7 Medical Surveillance System.

8 So those are the things that I think are
9 the most important.

10 CAPT. SCHOR: This is Ken Schor, I don't
11 know if I can make a comment to that question also?

12 DR. OSTROFF: Go ahead.

13 CAPT. SCHOR: I would say that as much as
14 I certainly agree with Dr. Jones, I think that our
15 approach with the Marine Corps Program for Sports
16 Medicine and Injury Prevention is perhaps adding the
17 athletic trainers as command -- as being owned by the
18 command and hopefully being involved with training
19 schedules of the units as we move from entry level
20 training sites and expand this into the operating
21 forces. So we're looking at those athletic trainers
22 who look to both prevent injuries and return athletes
23 or athlete-warriors in our case or warrior-athletes
24 back to duty more quickly.

25 We're trying to provide that kind of

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1 infrastructure through athletic trainers, so I think
2 it's a somewhat different approach. We certainly hope
3 to capture and shape research that would be needed,
4 but that's somewhat secondary.

5 The other thing is that obviously our
6 effort is firmly entrenched in the leadership of the
7 Marine Corps, both starting at the entry level
8 training sites and then as we expand to the operating
9 forces. I think that has taken it completely out of a
10 medical model, completely out of a safety model and
11 said that leadership is job number one. The Marine
12 Corps likes that. That's how they work. And we're
13 starting from that position and recognizing that the
14 epidemiology analysis and any medical recommendations
15 are purely that. They're recommendations and we are
16 not going to tell the Marine Corps what the cost of
17 doing business is. Hopefully, we'll show them some
18 solid data and some smart -- give them some smart
19 ideas.

20 The locus of control is in the Marine
21 Corps and not on the medical side. Thank you.

22 DR. JONES: I concur with that. This is
23 Bruce Jones. And that's what I meant by
24 accountability. It has to be in command hands. The
25 problem, while the problem is defined by medical data,

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1 the actual control of the problem rests in the hands
2 of commanders, so not only just because of the
3 military hierarchical structure, but because of where
4 the injuries are occurring and how they're occurring.

5 It makes sense that commanders have to take a lead on
6 that. And that's the difficulty from the medical side
7 is it's a problem that we can define and that we can
8 conduct critical research on, but we don't control the
9 problem. It's not like a vaccine-preventable disease
10 where we do the research and we do the medical care,
11 but we also do the prevention.

12 DR. RUNYON: This is Carol again. I guess
13 then the follow up is -- and maybe it's beyond the
14 scope of this discussion is what are the strategies to
15 make that happen. I mean there are those who do hold
16 the control and is it an issue -- is the research
17 purely by itself going to do the job or are there some
18 other areas of awareness, training --

19 PROF. BAKER: I think that one area, one
20 strategy is to have the Armed Forces Epidemiological
21 Board, again, really push as it did after our report
22 came out some years ago. It seemed to me that that
23 really had an effect in terms of -- with the Secretary
24 asking the Surgeons General of all the forces, well
25 what are you going to do about this? I think AFEB can

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1 be a leading light in this area.

2 DR. OSTROFF: Dr. Forster?

3 DR. FORSTER: I was wondering about the
4 issue of motor vehicle injuries and deaths and
5 wondering how the military folks are responding to
6 that issue because that does represent the highest
7 number of deaths and a very high percent of the
8 serious injuries, as the data show that you have
9 presented.

10 That seems like it would take a different
11 kind of an approach, and I'm wondering if they're
12 addressing that.

13 DR. JONES: I missed part of that
14 question. This is Dr. Jones.

15 PROF. BAKER: I could not hear it either,
16 I'm afraid.

17 DR. FORSTER: Okay, the issue is the motor
18 vehicle injuries, deaths which would seem to require a
19 different kind of strategy than, say, stress fractures
20 or sports injuries. And yet represents an enormous
21 part of the injury burden for the military.

22 How is that being addressed?

23 DR. JONES: This is the place where I
24 would say that the medical department places a very
25 big role. Having said that, I think the Safety Center

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1 has taken a primary responsibility for motor vehicle
2 injury prevention, and I still think that the lead
3 belongs there, but one of the things that the medical
4 department can do is provide more robust data for
5 tracking. As I said, our prevention successes have
6 been the result of very good surveillance systems at
7 the Service Safety Centers, especially for motor
8 vehicle and aviation crash fatalities.

9 The problem is is that the rates are now
10 so low that on any one post, I mean you go to Fort
11 Bragg, they only have 40,000 soldiers there. You
12 don't even expect one death per year in that size
13 population. Well, maybe one death, a couple of
14 deaths, but very seriously, you cannot track it with
15 fatalities any longer.

16 The medical data that we have provides a
17 tremendous source of information on larger numbers.
18 So if you look at hospitalizations, it gives the
19 Safety Centers and others a means of tracking whether
20 our future efforts are successful.

21 Also, I think the medical departments,
22 even for the Marine Corps plays a very, very big role
23 because you need an external source of data to know
24 whether you really made a difference. You cannot rely
25 on the people who are responsible for the programs for

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1 prevention to be providing the data on their success
2 also. What the medical data does, whether it's deaths
3 or hospitalizations or outpatient data, is provide us
4 with a way of knowing one, what the problems are; and
5 two, whether we have been effective in what we do.
6 And we need to provide that information to line
7 commanders. So there is a tremendous role for the
8 medical activities of the three services in injury
9 prevention.

10 PROF. BAKER: This is Sue again. I would
11 also comment with regard to motor vehicle related
12 injuries. I think commanders have tremendous
13 influence over such things as the likelihood that the
14 people in their units are going to be wearing their
15 seatbelts, not only on the base but off the base.

16 There are differences among the services
17 and I'm sure there are differences among the
18 individual units in any given service. But if one
19 thinks in terms of seatbelts as being a major
20 preventive measure and the fact that a lot of people
21 who are in crashes and injured in crashes have not
22 been wearing them and the other aspect that we know
23 already is very important is that of alcohol, whether
24 the base commanders have any influence in terms of
25 drinking off base or driving after drinking, I'm not

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1 sure, but it certainly is something that can
2 tremendously affect the readiness of their units.

3 DR. PATRICK: This is Kevin Patrick. I
4 really appreciate the very impressive presentation and
5 among other things, we were very proud to publish in
6 my journal, the American Journal of Preventive
7 Medicine, the results of that previous work. And this
8 is not meant to take away from any of this. It's just
9 I wonder, I'm slightly concerned in terms of the
10 selling up of this, if we dwell on simply the issue of
11 the sports-related injuries.

12 I think Jean's comments -- I was actually
13 going to ask the same thing. It seems as if it might
14 be productive to focus on both the sports-related
15 injuries, as you've mentioned there, Sue, because
16 they're so compellingly important. But also
17 potentially highlight something else because I'm
18 afraid that there might not be an attitude up the
19 chain someplace that well, boys will boys and girls
20 will be girls and we can't do anything about this.
21 You even mentioned one of your comments there was in
22 the preventability matrix is it culturally acceptable
23 to even think about intervening and I think there may
24 be a little -- it just occurred to me that there might
25 be some push back on that. While at the same time we

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1 might talk about developing the portable courts and
2 what not that might avoid those. It seems that a two-
3 pronged approach might be better for us to think about
4 to then endorse and say that not only are there these
5 compelling issues, but in your list were some
6 occupational issues, the jumping off of trucks and
7 slipping in areas where, in fact, interventions might
8 well work in work settings as well. So it's just a
9 minor suggestion.

10 PROF. BAKER: We're looking at sports
11 injuries. This is merely the first focus and come
12 September, we'll be turning our attention to the
13 whatever turns out to be our second choice. But I'm
14 only talking about the next six months where we're
15 focusing on sports and then we move on to another
16 area. I can't tell you right now what that is.

17 DR. JONES: I think, Kevin, that the
18 presentation that Susan gave was primarily by way of
19 example of how you would apply criteria to selecting
20 priorities and why you might pick one over another.
21 If we could pick any number of priorities off of that
22 list, presumably they would be done in a similar
23 fashion where we look at the highest priorities and
24 where is the work being done right now. And so yes, I
25 think falls would be a great area. Perhaps a closer

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1 look at the causes of military vehicular crashes might
2 be another area for fruitful research.

3 DR. PATRICK: Bruce, the comment was
4 really more if there's an action being requested on
5 the part of the Board within the next six months to a
6 year or two to once again endorse this effort and
7 sponsor it, it was really -- my comment was more in
8 the context of that. It would be nice to send forward
9 two or three of these examples that really reflect the
10 power of such strong analytical work.

11 DR. JONES: Well, if I could offer a
12 suggestion. I think what I would say is we've done
13 some piloting of the process for establishing
14 priorities, criteria for establishing priorities, for
15 programs and policy. And also some of Sue's slides
16 outline the criteria for setting research priorities
17 and research -- the criteria would be different for
18 research priorities because, among other things, you
19 don't have off-the-shelf solutions. The reason you do
20 research is either because you don't know what the
21 causes and risk factors are. You don't know what
22 works to prevent injuries. And so helping to
23 establish a set of militarily relevant criteria for
24 setting both programs and policy, these would be
25 medical program and policy recommendations and

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1 recommendations for research. That would be a very
2 helpful effort that I think would be doable.

3 Does that seem reasonable, Sue?

4 PROF. BAKER: Sure.

5 DR. OSTROFF: We're going to have to cut
6 the discussion because we have one more presentation,
7 but I have one quick question, if you could address.
8 Sue mentioned very briefly the issue of alcohol, and
9 alcohol is not only pertinent as far as motor vehicle
10 injuries are concerned, but also I'm sure plays some
11 sort of a role in some of the other injuries,
12 particularly the sports injuries, et cetera. One of
13 the issues that's come up on a periodic basis has been
14 the ready availability of -- and low price of alcohol
15 in military settings. I'm wondering if there's been
16 any research or thought given to what the potential
17 impact would be of not making alcohol so readily
18 available.

19 PROF. BAKER: I certainly think that is
20 extremely important and in fact, thought that alcohol
21 and its implications for injury in the Army might be a
22 -- I mean, that per se because it is relevant to a
23 number of different injury problems, may be something
24 that we ought to focus on soon.

25 DR. OSTROFF: Thanks very much to both of

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1 you. One thing that I did want to do before we move
2 on to our final presentation because Carol, I didn't
3 realize that you were actually on the phone -- is
4 Carol, I think this is your last meeting. You're
5 actually a departing Board Member and you're not here
6 in person, but we did want to recognize and thank you
7 for your very valuable contributions. In the interest
8 of time I'm not going to go through your very
9 extensive résumé, but I did want you to know that we
10 do have a plaque that we have available to you. We'll
11 have to send it to you because you're not here in
12 person, but it reads "Dr. Carol W. Runyan, for
13 exceptional meritorious service and outstanding
14 contributions as a member of the AFEB from September
15 1998 to September of 2002. As an AFEB member your
16 superb leadership, excellent organizational skills and
17 outstanding professional knowledge contributes
18 significantly to the promulgation of numerous
19 important policy and program recommendations for the
20 Department of Defense. Your contributions have
21 significantly enhanced the health and well-being of
22 sailors, soldiers, airmen, marines, DOD civilians and
23 their families." And we really thank you for all
24 you've done and we're very sorry that for your last
25 meeting you actually couldn't be here in person. But

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1 it will come in the mail.

2 DR. RUNYON: Thank you. I'm sorry I
3 couldn't be there as well, although you would be able
4 to see me blushing which you can't see over the phones
5 from all those nice things you said. So thank you.

6 DR. OSTROFF: Why don't we move on to our
7 last presentation which is an update on the Navy
8 Asbestos Medical Surveillance Program, and you're
9 welcome to stay or depart. And since we do have a
10 time constraint, I'm sure that Captain Bohnker can get
11 through this presentation rather quickly.

12 CAPT. BOHNER: The next slide, please.
13 That ship probably doesn't have asbestos. That one
14 probably does. Next slide. A little bit of the NEHC
15 logo there.

16 Next slide, please. There's a lot of
17 history of the Navy, huge program going back, federal
18 guidelines in the 1970s, the NAVOSH limits were
19 established in the 1980s. The asbestos program was
20 created. The AFEB has three recommendations in 1978.

21 I trust nobody here was around when those
22 recommendations were out. I won't talk about them too
23 much.

24 Next slide, please. Asbestos.
25 Interesting area. The wrecking part of it, forms

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1 issues began in the 1970s. There's Civil Service and
2 active duty. Two parts of the process. A big
3 physical exam process and then a radiology test.

4 The History and PE forms are changing.
5 Then in 1979 and 1983 they are changed. In 1990 they
6 were changed again. That's important. The X-ray
7 forms are about the same, actually, through the whole
8 period.

9 Next slide. A little bit of the database
10 history. It's a computer program. It was stored up
11 in Navy Medical Information Management Command and for
12 a while it was a "flat" file. It was brought down
13 here because they have a Dbase III file. Actually,
14 one of the goods things of Y2K was they went back and
15 cleared everything in the databases. And this
16 analysis actually started as a process of looking at
17 databases. There's 300,000 records from 1980 to 1990;
18 150,000 records from 1990 to 1999.

19 There's been some past literature on it.
20 Nothing real recent, nothing very much.

21 Next slide. Three hundred thousand
22 records; 80 percent are Civil Service; 18 percent
23 active duty Navy; 2 percent other. They're all Army,
24 Air Force, Navy in that.

25 Next slide. Three percent are female, yet

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1 -- that many slides, yet 3 percent is a big number.

2 Next slide. Gender issues. Seventy-five
3 percent Caucasian; 12 percent African-American, 3
4 percent Asian. The shipyard at Pearl Harbor has a big
5 Asian population. Hispanic, other.

6 Next slide. Data analysis. Big issue.
7 Important. 1990 the form changed. Before 1990,
8 asbestos exposure was a categorical variable. Zero, 0
9 to 1, 1 to 5, 5 to 15 years and over 15 years. That's
10 all it is.

11 After 1990, there's a way you calculate it
12 by a number of years of exposure. To do an analysis
13 you have to linear progression modeling and you get
14 two analyses separate. It's important.

15 Next slide. Our dependent variables FEV1
16 and FVC are measured in 10 ML units. Those both
17 decrease with age, smoking, exposure.

18 Next slide. Independent variables,
19 continuous age, smoking exposure and asbestos
20 exposure, weight in pounds, height and year of
21 examination. Those actually came off the forms.

22 This all came off of forms. The forms
23 were done 20 years ago. You got what you got.

24 The first part of it, categorical
25 exposure. Asbestos -- chose just to look at white

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1 males. Pulmonary functions were affected by gender
2 and ethnicity, so you kind of slid down. Some of the
3 data was hand written. You kind of slice into a nice
4 pie of 59 to 79 inches, ages 30 to 60, weight 100 to
5 360 pounds. There's a 720 pounder in there. I don't
6 know whether it was 120 pounds. It got misread.
7 Threw it out.

8 Not the cleanest data base in the world,
9 but it is what it is.

10 Interesting group of people. Went to a
11 mid-period estimate for the asbestos exposure, 1, 3,
12 10 to 20 years. There's 120,000 records that made
13 that level of the sample.

14 If you look at it, this is just by year.
15 Blue is the white males that were included; red is the
16 white males that weren't included. The leading thing
17 that was not included was their birth, age, date they
18 were born, year when they were born. So you couldn't
19 calculate age. Everything else goes back to that.
20 You can't do much with it and you have to drop them
21 out. These are all the other ones.

22 White males were 75 percent of it and
23 about 8 percent of white males made it through the
24 criteria.

25 Next slide. One problem. The form was

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1 changed in 1983. Before that, something about smoking
2 was real funny and so I didn't do any analysis before
3 1983. This is just mean smoking exposure after 1983.

4 Next slide. Asbestos exposure. These are
5 people who have no exposure. These are people who
6 have greater than 15 years of exposure. You see it
7 kind of changes over time. Actually, percentage-wise,
8 more larger exposure early, it kind of went down.

9 Next slide. Important slides right here.

10 This was the linear regression model. Mid-period of
11 asbestos exposure for FEV1. For asbestos exposure
12 right there, 3 ML of pulmonary function loss per year
13 of asbestos exposure. These other -- significance
14 goes zero with this thing. That big a sample size.
15 You can see smoking is about 12. Exam years --
16 actually, I should say that people, our population,
17 pulmonary functions are getting better over time.
18 It's hard to find it in the analysis, but that's not
19 completely unexpected and there is no interaction
20 term. The "R" is about .6.

21 Next slide. This is FVC, same thing. For
22 asbestos exposure, we're losing about 5 ccs of
23 pulmonary function per year of asbestos exposure in
24 that population.

25 Exam year is still positive. Smoking is

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1 all bad.

2 Next slide. Went back and tried to
3 stratify this analysis. This is between zero and one
4 years and 1 to 5 years, just that group. There wasn't
5 any difference. If you looked at 0 to 5 years and
6 compared them from 5 to 15 years, they were different
7 there. In the 15, 0 to 14 years and then the 15 plus
8 years, again they were different significantly.

9 I didn't really expect to see much effect
10 here. The greater than 15, I thought I would find
11 something. You kind of get to 5 years and a day and
12 it causes an effect.

13 Next slide. This is FVC. You get the
14 same effect.

15 Next slide. Summary there is
16 statistically significant effect demonstrated from
17 asbestos exposure from 1984 to 1990. This goes back
18 to when it was first started. Effect was demonstrated
19 for over 5 years of exposure and the PFT improvement
20 with advanced year of exam.

21 Next slide, please. Okay. The form has
22 changed. An important concept here. Asbestos
23 exposure is measured in years rather than in
24 categorical duration. The only thing we added was an
25 exposure grouping of people that had past exposure,

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1 but not current exposure; people that had direct
2 exposure reported as "I work with asbestos" and people
3 with indirect exposure, "I work around asbestos." The
4 same linear regression model, same exclusion criteria.

5 Next slide. 1996 was a fun year. We lost
6 about half the exams. Don't know why. It's the only
7 way I can explain that data base. If you look,
8 there's some 40,000 exams done per year earlier.
9 These are starting to go down. The rates are going
10 down nicely. Our population is getting older.

11 Next slide. Smoking. Smoking is actually
12 going down across it and asbestos is still going up.

13 Next slide. Categories of asbestos
14 exposure. Actually, a fascinating study. You've got
15 5 percent have no exposure. Some people never get any
16 exposure. They're put in a program, but they never,
17 ever get any exposures so they never really become
18 exposed, but they're still in a program. These are
19 all people that have past exposure. They are not
20 current exposure. These are direct and indirect. And
21 you see, most of the people have no direct exposure.

22 Next slide. Cigarette uses per day.
23 You're actually getting better. Our population is
24 smoking less and the heavy smoking is going down
25 across our population.

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1 Next slide. Some of the big analyses.
2 1991, FEV1, all records of asbestos exposure. That's
3 positive. That's a protective fact. It doesn't make
4 a lot of sense. I don't know why it's that way, but
5 it's a significant .001. That's a huge database.

6 Asbestos exposure, the interaction with
7 smoking is negative. P equals zero and it's about a
8 tenth, that's .09 ML per asbestos year/smoking year I
9 guess is how I'd describe that. So people with about
10 10 years of either asbestos or smoking history
11 combined together, that kind of neutralizes out.

12 Next slide. FVC, it's kind of the same.
13 We're still seeing about that effect in asbestos is
14 protective.

15 Next slide. These are sliced in the
16 categories of exposure out. None plus prior
17 exposures. This is the one that asbestos exposure
18 isn't significant. .8 MLs per year, protective again.

19 However, the interaction term with asbestos and
20 smoking is negative remains.

21 Next slide. This is FVC on none prior.
22 Again, asbestos is significant. It's protective.
23 .023 is less than .05, but this sample size is not
24 real impressive. You still get a very significant
25 asbestos/smoking interaction term.

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1 Next slide. This is direct. These are
2 people that work with asbestos day to day, our primary
3 group there. Asbestos exposure wasn't significant.
4 Neither was the interaction.

5 Next slide. These are direct again.
6 Asbestos was not significant and neither was asbestos
7 and smoking.

8 Next slide. These are indirect people.
9 These people had the least exposure. They work around
10 asbestos. Anybody in the world can probably claim
11 that with a little bit of justification. What that
12 means, I don't know. That's a self-proclaimed thing.
13 There, again, it's protective and a positive
14 interaction term.

15 Next slide. Same with FVC.

16 Next slide. Asbestos effect is small at
17 worst and questionably protective. It's really not
18 very much. The two stage together, which they were
19 doing better is how I'd interpret them. Prior
20 exposure demonstrated more effect than current.
21 That's actually more impressive if you don't include
22 the interaction. The people with past exposure are
23 the only ones that really stay very statistically
24 impaired. There is just a little bit there. You
25 don't use the interaction term. Any interaction for

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1 smoking and asbestos is significant because that's the
2 only thing we knew, is that people who had prior
3 exposures reduced their smoking. It would still have
4 an impact if they're smoking still.

5 Next slide. Cross sectional analysis,
6 white males only. It could have been some loss to
7 follow-up. I'm not quite certain about that. This
8 wouldn't provide any insights into malignancies and
9 the year of examination issue. The reason I included
10 that was because -- I didn't initially. When I
11 finally got around to including it, it kind of popped
12 out positive and significant and I found some
13 literature that it should be there, so it was
14 interesting. Next slide.

15 Just appreciation about people. Asbestos
16 is a big thing in our shipyards and ships. A long
17 time ago, a lot of people did a lot of work with it,
18 had exposed to chemicals.

19 Next slide. This would be all. Sir?

20 DR. OSTROFF: Questions and comments from
21 the remaining group?

22 COL. RIDDLE: I'm buying the beer for
23 Bruce.

24 (Laughter.)

25 DR. OSTROFF: This is very impressive.

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1 What's your explanation for why the association seems
2 to have gone away? Are we doing something better in
3 terms of protecting individuals from exposure?

4 CAPT. BOHNER: I don't think there's any
5 exposure. I think our respiratory protection program
6 has basically eliminated any exposure. I think the
7 interaction term which stays in there is actually --
8 you've got this data base and some of those people
9 have old -- a lot of exposure and all the variables
10 are going away. They're smoking less. Asbestos
11 exposure is less. The other issues -- and that kind
12 of throws it into that interaction term to say before
13 there was a lot of exposure both with smoking and with
14 asbestos, it's now gone. So it's just getting better.

15 DR. OSTROFF: What sorts of job categories
16 would in today's age answer yes, they have direct
17 exposure to asbestos?

18 CAPT. BOHNER: People who work on our
19 ships that still have some asbestos around them. We
20 have Asbestos Rip Out Teams. We have big workers in
21 our shipyards that do that still. There's still a
22 fair amount of asbestos around.

23 The biggest group is people with past
24 though. People with prior exposure from the past, are
25 the biggest number of people submitting these exams.

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1 I'm not even fully certain why they do
2 that. They are actually working -- I can't imagine
3 our system is so great that it identifies these people
4 as having been in the asbestos program and forces them
5 to do the exam. We have no problems with getting
6 people in that have really great reason for exams.
7 Those people, we're not helping them. We're not
8 helping them with their medical care. I don't know
9 what -- I think they must want to come in. There is
10 some self-selection bias there.

11 There's still a lot of asbestos out there
12 in those ships.

13 DR. OSTROFF: Other comments?

14 COL. RIDDLE: These were civilians?

15 CAPT. BOHNER: All military.

16 DR. OSTROFF: All I can say is that having
17 had an uncle that died of mesothelioma from working in
18 a shipyard in World War II, I certainly appreciate the
19 fact that the Navy is still paying attention to this
20 and it's nice to know that the potential for exposure
21 seems to be going away.

22 Thanks very much for the presentation.

23 Rick, do you have any closing comments
24 before I rap the gavel?

25 COL. RIDDLE: Yes. I want to thank

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1 everybody for bearing with me. This has been a tough
2 meeting that collapsed into place, but a very good
3 meeting, another very good meeting. We'll certainly
4 put things together and kind of lay out a plan. If
5 you haven't turned in your continuing medical
6 education forms, if you'll let -- go ahead and fill
7 those out and turn them in. And we'll get details out
8 on the meeting in May very quickly, and we'll work
9 towards a September meeting place. If there's any
10 ideas or if the Board has any ideas --

11 DR. OSTROFF: Yes, if anyone has a
12 suggestion about a --

13 DR. GARDNER: Puerto Rico, Seattle.

14 COL. RIDDLE: I actually thought about
15 that ourselves is the pilot survival training school
16 at McCord.

17 DR. OSTROFF: Fairchild is Spokane.
18 Spokane is not quite the same as Seattle, having lived
19 in Washington state. There's also Bangor. That's a
20 beautiful location.

21 DR. GARDNER: San Juan, there's a nice
22 Naval Air Station in San Juan.

23 DR. OSTROFF: Absolutely, there are many
24 nice military facilities in the --

25 DR. GARDNER: In Puerto Rico.

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1 DR. OSTROFF: In the San Juan Islands.

2 COL. RIDDLE: Vieques.

3 DR. OSTROFF: Well, Vieques in September
4 might be a little bit of a problem. That's the peak
5 hurricane season and so any visits to places like
6 Puerto Rico I would want to save for the winter
7 meeting. You know a September meeting potentially up
8 in the Pacific Northwest, I think is really quite
9 doable and there probably are a lot of interesting
10 programs to see up there. I mean if you take Whidbey
11 Island alone there's the Naval Air Station and there's
12 the Bangor facility and a nuclear submarine base.
13 There are many potential options up there.

14 DR. GARDNER: Good idea.

15 DR. OSTROFF: Of course, there's Fort
16 Lewis and McCord. So that might be a good suggestion.

17 COL. RIDDLE: And then maybe for winter
18 next year we'll see about the Coast Guard in Key West.

19 DR. GARDNER: Key West would be lovely.

20 DR. OSTROFF: Key West is definitely a
21 possibility and Puerto Rico is a possibility too.
22 They have facilities in Puerto Rico too.

23 COL. RIDDLE: Any comments or suggestions,
24 back to us, please. We've made a few changes at this
25 meeting. I know Dr. Cattani had suggested doing the

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1 Executive Session on the first day, and I think that
2 worked very well. Worked very well.

3 DR. OSTROFF: Any comments from those who
4 remain?

5 DR. GARDNER: You guys did a really great
6 job.

7 DR. OSTROFF: Well, I must confess this
8 actually -- we pulled this off better than I would
9 have anticipated, given all the difficulties with this
10 snow storm and you can do remote presentations. No
11 question about that. It was a great success. And in
12 future circumstances if we do have difficulties like
13 this, I think that it's a really viable option.

14 COL. RIDDLE: One thing that makes it nice
15 for the people that don't attend, if the speakers do
16 get their slides in, in advance. I know some people
17 that were on the teleconference were able to go to the
18 website and just flip through the slides and they're
19 available there for them to take a look at.

20 We tried to put a lot more material on the
21 website for this meeting and we'll continue to enhance
22 that for future meetings.

23 DR. GARDNER: Can I ask is the background
24 material from, for example, this meeting going to
25 remain on the website or how are you doing that?

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1 COL. RIDDLE: Yes ma'am. What we had done
2 is just make that, in essence, a historical archive.
3 And so we will add material that we didn't have
4 available to us before I left. We'll update the rest
5 of the slides. The transcripts will be up there,
6 except for the Executive Session transcripts. And
7 pretty much so everything you have we'll have up
8 there.

9 The Iowa Study Protocol, a few things
10 there that may be a little bit --

11 DR. GARDNER: We could leave this.

12 COL. RIDDLE: I'll mail that back to you
13 if you want me to.

14 DR. GARDNER: No, no, no. I don't mean
15 that. I don't want -- what I'm saying is if it's
16 going to be on the web, I don't need a hard copy.

17 COL. RIDDLE: Okay. Yes, some people
18 prefer, some people don't.

19 DR. OSTROFF: One last business item is
20 that we do need to get this report on this smallpox
21 vaccination program finalized. And so what I would
22 suggest, Rick, if you could send out an e-mail since
23 most of the members aren't here and ask them that if
24 they do have any comments on this particular report to
25 get them back to us by Friday, and then we can get it

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1 finalized and get it to Dr. Winkenwerder.

2 COL. RIDDLE: Okay. I had a few comments
3 that I'll make some changes on and we'll send the
4 electrons out so maybe you'll have that by Monday.

5 DR. OSTROFF: If no objection, I'm going
6 to rap the gavel. Meeting adjourned.

7 (Whereupon, at 5:05 p.m., the meeting was
8 concluded.)

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