

UNITED STATES DEPARTMENT OF DEFENSE

DEFENSE HEALTH BOARD

OPEN MEETING

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ANDERSON COURT REPORTING
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1 P R O C E E D I N G S

2 (8:15 a.m.)

3 CAPT BLOOM: -- consequences may result
4 from untreated or under treated PID, including
5 four to ten fold increase in the risk for chronic
6 pelvic pain, a six to ten fold increase in the
7 risk for ectopic pregnancy, a six fold increase in
8 the risk for infertility, as well as an increased
9 risk for recurrence and the potential for tubal
10 ovarian abscess, and peri-hepatitis among active
11 cases.

12 The pathogenesis of this disease is
13 highly complex, with etiology likely to be
14 polymicrobial and CT chlamydia representing one
15 important causative organism. Chlamydia itself is
16 now the most frequently diagnosed bacterial
17 sexually transmitted infection among
18 industrialized nations with approximately three
19 million cases annually diagnosed in the United
20 States.

21 Of particular note is the large
22 proportion of female chlamydia infections that are

1 asymptomatic and a high probability of
2 progression to pelvic inflammatory disease among
3 chlamydia infections.

4 Furthermore, data suggests that
5 chlamydia associated PID is itself often
6 asymptomatic and that a prior chlamydia infection
7 may predispose one to later PID development.
8 Recognized risk factors for PID and chlamydia are
9 generally consistent with one another, primarily
10 age less than 25 years, which comprises both a
11 behavioral component, risk taking behavior, and a
12 biological component associated with the histology
13 of the cervix.

14 In addition, race/ethnicity, with
15 African- Americans generally being at greater risk
16 than other race ethnic groups in the United
17 States. More recent, new, and a greater number of
18 sexual partners are both associated with increased
19 risk for chlamydia and PID development.

20 In addition, contraception methods have
21 been associated with PID. Barrier methods are
22 associated with a decreased incidence,

1 intrauterine devices a temporary increase in PID
2 risk, and oral contraceptives have been associated
3 with a decreased risk of PID development.

4 Also, low educational achievement,
5 living in the southeastern United States, and
6 other factors such as cigarette smoking have been
7 associated with increased risks for chlamydia and
8 pelvic inflammatory disease.

9 Due to the high prevalence of
10 assymptomatic infections and severe reproductive
11 consequences of chlamydia and subsequently PID,
12 the United States Preventive Services Task Force
13 recommends that all sexually active women less
14 than 25 years of age receive an annual screening
15 for chlamydia.

16 In response to this recommendation, this
17 very board, under the prior designation as the
18 Armed Forces Epidemiology Board, recommended
19 chlamydia screening for all female military
20 accessions, as was noted in the introduction.

21 The U.S. Army instituted a policy of
22 screening during the first year at the annual

1 required gynecologic exam in fulfillment of this
2 Armed Forces Epidemiology Board recommendation,
3 whereas the U.S. Navy has instituted a policy of
4 screening all women within the first few days of
5 service. So, screening of Army recruits may be
6 delayed up to 12 months compared with the Navy
7 recruits, assuming 100 percent compliance with
8 service specific screening policies.

9 Our aim for the analysis I'll present
10 today was to consider rates of PID among Army and
11 Navy accessions by service and to describe any
12 differences observed.

13 For the purposes of this analysis, a
14 case was defined as the first occurrence of an
15 outpatient pelvic inflammatory disease diagnosis
16 on record. This was ascertained as a 614 prefix
17 ICB9 Code.

18 Now, we restricted this case definition
19 to outpatients only in an effort to first,
20 increase the internal validity of the analysis and
21 that inpatient and outpatient disease may be
22 patho-physiologically different. For example,

1 chlamydia associated PID generally presents as a
2 more mild condition than that associated with
3 gonorrhea with the later perhaps increasing the
4 likelihood for hospitalization.

5 In addition, we wanted to increase case
6 capture and generalizability of the analytic
7 results as the majority of U.S. cases are
8 diagnosed and treated in the outpatient setting.

9 Data for the current analysis were
10 captured using the Defense Medical Surveillance
11 System, the DMSS, which many of you are likely
12 very familiar. Women were included in this
13 analysis if they one, were accessioned into the
14 active component of the Army or Navy between the
15 first of January 2001 and December 31, 2005.

16 Now, the starting date was chosen in
17 order to allow services time to implement the 1999
18 Armed Forces Epidemiology Board chlamydia
19 screening recommendation. And the ending date was
20 chosen in order to assure complete data capture at
21 the time of data analysis.

22 In addition, women had to be less than

1 25 years of age in order to focus the study on a
2 higher risk group and maximize the number of
3 events captured. And women had to have no missing
4 covariate data. I'll describe these covariates in
5 a moment.

6 We captured just over 58,000 Army and
7 33,000 Navy accessions for this analysis. Now,
8 the women included in this study were followed
9 from their date of accession into service until
10 the first diagnosis of PID, their 21st -- 25th,
11 excuse me, birthdate, separation from the active
12 component, or the end of follow up again on
13 December 31, 2005. We captured 1,276 incident
14 outpatient PID cases among Army accessions and 546
15 cases among Navy accessions.

16 This figure demonstrates the
17 distribution of follow up time in the current
18 study stratified by service, in which Army is
19 represented by green bars and Navy by blue bars.
20 The median follow up time among Army accessions
21 was 12 months with 57 percent of the cohort
22 followed for a minimum of 12 months. And these

1 women contributed 588 case diagnoses.

2 The median follow up time among Navy
3 accessions was 21 months. Sixty-six percent of
4 the cohort was followed for a minimum of one year,
5 and these women contributed two hundred and forty
6 case diagnoses.

7 Covariates that were identified in the
8 literature as important predictors for pelvic
9 inflammatory disease and were also available in
10 the Defense Medical Surveillance System included
11 race/ethnicity and home of record, which were
12 fixed at the time of accession into service; in
13 addition, age, which we used year of birth as a
14 fixed proxy during analysis and time in service,
15 for which we used year of accession as a fixed
16 proxy.

17 In addition, education, rank, which was
18 employed as a proxy for socioeconomic status, and
19 marital status, which was employed to represent
20 sexual behavior varied over the duration of follow
21 up.

22 Now, our analytic strategy during this

1 study comprised several phases. In the first, a
2 uni-varied analysis was conducted, in which crude
3 PID rates were characterized by service and values
4 for the aforementioned considered covariates. We
5 also conducted a bivariate analysis in which
6 associations between and among service covariates
7 and PID rates were considered.

8 In the third phase, a multiple Poisson
9 regression analysis was employed to evaluate the
10 effects of covariates on the observed service
11 specific PID rate association. This employed a
12 multinomial approach in which service was entered
13 as a predictor for PID.

14 And any covariates demonstrating a p
15 value less than .01 during the aforementioned
16 bivariate analysis were entered into a stepwise
17 procedure. There were -- retained p value for a
18 coefficient was less than .05, confidence interval
19 of 95 percent, excluding unity.

20 In addition, confounding and employing a
21 changing coefficient criteria for the service PID
22 association as well as interaction employing a

1 change in log likelihood criteria relaxed to a p
2 less than .01 were subsequently evaluated during
3 their multiple plus zone regression analysis.

4 A time to event analysis was conducted
5 as well in the fourth phase, and this employed the
6 life table method using four month intervals of
7 follow up to characterize changes in risk for PID
8 over the duration of follow up or time since
9 accession.

10 This table demonstrates the distribution
11 of fixed covariates at accession. All covariates
12 fixed at the time of accession demonstrated
13 statistically significant differences between
14 service using p less than .05 as the criterion.

15 Army accessions were more likely to be
16 African-American or Hispanic than Naval
17 accessions and less likely to be Asian or Native
18 American. Furthermore, Army accessions
19 demonstrated a higher probability of reporting a
20 home of record in the southeastern United States
21 than did Navy women.

22 This table demonstrates the distribution

1 of time varying covariate values at the time of
2 accession. When considering time varying
3 covariates, values at accession were also
4 significantly different between services. Army
5 accessions demonstrated a higher proportion of
6 postsecondary education at accession as well as a
7 higher probability for being married.

8 In addition, Army women were accessed at
9 greater rank overall than were Navy women. This
10 table demonstrates crude risk ratios and 95
11 percent competence intervals for PID by covariate.
12 Only statistically significant risk ratios are
13 presented here in the interest of space. These
14 risk ratios were generated using simple Poisson
15 regression models.

16 Army presented an incidence rate of 13.6
17 diagnoses per thousand person years. This was
18 approximately 64 percent greater than the Navy
19 rate of 8.3 diagnoses per thousand person years or
20 follow up.

21 Among race ethnicity, only Asian,
22 demonstrating a percent decreased risk relative to

1 the reference category, white and African-American
2 demonstrating a 60 percent increase risk relative
3 to the reference category, whites, were
4 statistically significantly associated with pelvic
5 inflammatory disease diagnosis.

6 Women who reported a southeastern state
7 as their home of record were at a 22 percent
8 increased risk relative to those women who did
9 not. Each increased level of education
10 demonstrated a 33 percent decrease in PID risk.
11 Education was modeled as an ordinal variable.

12 Unexpectedly, married women were at a 27
13 percent increased PID risk compared with unmarried
14 women. However, other data suggests this
15 observation is due to a greater healthcare
16 utilization and case ascertainment among married
17 as compared to unmarried women, rather than due to
18 a causal association between marriage and pelvic
19 inflammatory disease.

20 We also noted a linear trend of
21 decreased risk with increasing rank as evident by
22 the 48 percent and 75 percent decrease in PID risk

1 among senior enlisted and officer ranks relative
2 to junior enlisted ranks respectively.

3 Following consideration of all the
4 aforementioned significant covariate predictors of
5 PID, possible confounding and interaction terms,
6 the final multivariable model comprised service,
7 race/ethnicity, marital status, and rank as
8 predictors for pelvic inflammatory disease.

9 Please note that the effect estimate for
10 service indicating a statistically significant 62
11 percent increased risk for Army compared with Navy
12 and adjusted for other conditionally independent
13 predictors of PID is very similar to that which
14 was observed for the crude analysis, which was an
15 approximate 64 percent increased risk.

16 This suggested that no confounding
17 occurred by the considered covariates. Again,
18 Asian race ethnicity was protective and
19 African-American was a risk factor for PID
20 independent of service.

21 The increased "risk" associated with
22 marriage was also independent of service, and the

1 protective effects of rank persisted in the
2 multivariable model as well. Also please note
3 that education and home of record were not
4 retained in the final model, indicating that they
5 were not independent predictors of PID conditional
6 on other covariates in the Poisson regression
7 model.

8 Whoa, okay. This graph demonstrates the
9 hazard function with what were supposed to be 95
10 percent competence intervals as a function of time
11 since accession. Hopefully, they are visible on
12 your handouts. These are stratified by service
13 with solid lines representing the army and the
14 broken lines representing Navy.

15 The hazard function, for those who
16 aren't familiar, describes the instantaneous risks
17 for being diagnosed with PID conditional on having
18 not been previously diagnosed or censored, so
19 conditional on still being at risk at any
20 particular time point T sobye (?).

21 Please note in particular that during
22 the 8th to 24th month of follow up and you can't

1 see on the picture here, but in this interval, the
2 95 percent competence intervals for the
3 instantaneous hazard function do not overlap
4 between services, suggesting a statistically
5 significant difference.

6 Substantial overlap of these intervals
7 occurs following the 24th month of follow up.
8 Further note that the greater variability appears
9 to occur among the Army accessions, the solid
10 line, with the Naval accessions, the broken line
11 remaining comparatively uniform during the period
12 of follow up.

13 The ratio of the hazard function over
14 follow up approximates the earlier described crude
15 and adjusted risk ratios, which were 1.64 and 1.62
16 respectively.

17 So overall in this analysis, we observed
18 that adjusted PID rates were approximately 62
19 percent greater among Army compared to Navy
20 accessions. Marital status, race/ethnicity, and
21 rank were independent predictors of pelvic
22 inflammatory disease diagnosis among military

1 accessions, Army and Navy. And significant
2 differences in the hazard rate were evident in the
3 approximate 8 to 24th month post accession.

4 There were several limitations for the
5 current analysis, just a few of which I'll
6 summarize. The complex pathology of PID, that is
7 there are several causative organisms associated
8 with pelvic inflammatory disease development. In
9 addition, a small proportion of pelvic
10 inflammatory disease is not even associated with
11 sexually transmitted infection. Furthermore, no
12 incubation period is currently defined for PID.

13 We also employed a clinical case
14 definition, which may have poor sensitivity as
15 well as specificity. And the later has been
16 demonstrated previously in studies comparing
17 clinical case definition to the gold standard of
18 laproscopy.

19 Our service comparison, that's Army
20 versus Navy, the exposure assessment in effect
21 assumes differential patterns of CT screening,
22 chlamydia screening. We have no data to confirm

1 this assumption. Due to the surveillance nature
2 of these data, we had no information regarding
3 sexual habits, use of contraception, or other
4 important covariates that may be substantial
5 confounders of any service pelvic inflammatory
6 disease diagnosis association.

7 Furthermore, there was a possibility for
8 an ascertainment bias due to the diagnosis of
9 women with PID while at sea among the Naval
10 accessions that may not have been captured by the
11 DMSS, our data source. However, other data we
12 have suggests that this role, if in effect, would
13 likely be limited.

14 However, the current study offered --
15 analysis, excuse me, offered several advantages
16 including the employment of a large sample size
17 with a fairly large number of events.
18 Furthermore, the results of this analysis were
19 consistent with those of a clinical trial of
20 chlamydia screening and PID development among
21 high-risk civilian women in Seattle, Washington.

22 We had complete covariate data with

1 accommodation for variation in covariates over
2 time, and the effect estimate for service risk was
3 consistent regardless of covariate adjustment.

4 In conclusion, I believe the results of
5 this analysis suggest a need for the design and
6 conduct of a comprehensive, hypothesis driven
7 study to identify the most probable source of the
8 reported difference in service specific PID rates
9 among female military accessions.

10 And in this vein, I'd like to leave you
11 with a favorite quote of mine by Isaac Asimov. I
12 believe it's curiously appropriate. "The most
13 exciting phrase to hear in science, the one that
14 heralds new discoveries is not eureka, but that's
15 funny."

16 I'd like to acknowledge and thank my
17 collaborators on this project and analysis for
18 their hard work and especially their patience and
19 tolerance. And thank you, the audience, very much
20 for your time. Thank you.

21 (Applause)

22 DR. POLAND: Okay. It's open for

1 questions. I'd like to focus, because there's a
2 lot of methods guys here, a little less on the
3 methodology and more on the substantive issue.

4 Just as a reminder, you have under tab 8
5 the considerable number of times the Board has
6 considered this and issued basically the same
7 recommendation in regards to recruit training.
8 And this is data confirmatory of our concerns that
9 this be done at the recruit accession level.

10 So, Wayne, you want to start?

11 MR. LEDNAR: Wayne Lednar. A very nice
12 analysis of this issue, so thank you for taking us
13 through this. And without dwelling on the
14 methodological issues, I thought you explained
15 them really quite nicely.

16 CAPT BLOOM: Thank you.

17 MR. LEDNAR: What I wonder about the
18 Army's experience, when you describe it's an older
19 groups, it's a higher ranked groups, is whether or
20 not the accessions into Army basic training have a
21 greater proportion of individuals who will go onto
22 the reserves and the National Guard than perhaps

1 the Navy accession stream, so that they're
2 bringing to basic training really quite a
3 difference experience and of course, coming out of
4 basic training in the follow up period, will be
5 perhaps in a different situation as well,
6 obviously more married.

7 So, the groups are quite different in a
8 way that may relate to risk that may be important
9 as we think about implementing a standardized set
10 of screening.

11 What I was listening for but I didn't
12 hear was given the difference in service policy
13 for screening and your analyses, how you come back
14 and tie the two together.

15 So, would you suggest the Army would be
16 well served by adopting an approach more similar
17 to the Navy given your observations of incidence
18 and follow up?

19 CAPT BLOOM: Well, in response to your
20 first point, all of these women that were captured
21 in this study went into active duty at least in
22 this case, both Army and Navy. And this was -- we

1 decided on doing this in order to be able to
2 capture most, if not all, medical encounters among
3 these women who have complete medical coverage
4 through the military, as you're well aware, on
5 active duty.

6 As far as whether or not the Army policy
7 should be changed to resemble that of the Navy, I
8 can't answer that, sir. All I -- all I believe
9 this analysis says is that something in the Army
10 appears to be going on differently than that in
11 the Navy. And a hypothesis driven study looking
12 at chlamydia screening possibly itself will be
13 merited in order to find out what accounts for
14 this difference.

15 DR. POLAND: Dr. Halperin and then Dr.
16 Gardner.

17 DR. HALPERIN: The methods are great.
18 Can't resist and I'm paralyzed by the separation
19 of methodology from policy but I'll try anyway.
20 So, rather than a whole other study, within the
21 Army, you have people who were screened at various
22 times from very soon, like the Navy, to very late,

1 at the extreme at a year.

2 So, have you done or considered, for
3 example, a nested case control study within the
4 Army looking at essentially dosing it? That is,
5 women who are screened within the first month,
6 within one to five months, within five to nine,
7 nine to twelve, looking to see whether the
8 impressive differences that you found really have
9 to do with the thing that's staring us in the
10 face, which is the Navy screens early and the Army
11 screens anytime, so it's basically a dose response
12 within the Army.

13 You already have the data, looking to
14 see whether the earlier looks more like the Navy
15 and the later looks worse than what you've shown
16 for the Army because the Army is obviously a
17 combination of early and late screens.

18 CAPT BLOOM: That will be an ideal
19 approach, I think, sir, to what we have here.
20 However, at the time of the study -- and I'm not
21 sure if this has changed -- the DMSS did not have
22 laboratory data available, and so, that's an

1 inherent limitation here is that I have no idea --
2 or we have no idea, excuse me, who was actually
3 screened and who wasn't and when they were
4 screened.

5 If we did have these laboratory data, I
6 would be thinking exactly along the lines
7 hopefully of what you just mentioned, because I
8 think that's a very appropriate approach.

9 DR. POLAND: Dr. Gardner?

10 DR. GARDNER: Another variable I didn't
11 hear covered was the partner treatment and was
12 that equal in the two services. The Navy screens
13 males the leukocyte esstrays (?) test at recruits
14 and the Army doesn't. So, if you -- if you got
15 rid of -- if you treated the males or more
16 effectively, then you might end up with
17 differences in the (inaudible) in the two
18 services.

19 CAPT BLOOM: That's an excellent point,
20 sir.

21 COL GIBSON: I just want to add we've
22 got a series of presentations here which will add

1 to and synergize with Dr. Bloom's work. This
2 issue of availability of laboratory data, the
3 ability to look at the compliance with policy on
4 periodic reproductive health programs and doing
5 chlamydia screenings at those reproductive health
6 exams will add to the discussion.

7 I have one real small question. The --
8 I noticed you used rank and we had some E6s in
9 there and since your cohort was under 25 years of
10 age, what was the -- how many E6s do we have who
11 are under 25 years of age?

12 That's kind of an unusual group,
13 couldn't have been very many. I'm surprised that
14 it was selected as the covariate rather than
15 length of service, which is -- what I would think
16 would be the one to go in.

17 CAPT BLOOM: Yes, sir. We examine
18 length of service as well, which actually the
19 slopes even stratified by Army Navy were flat in
20 terms of PID risk for length of service. And with
21 regard to the E6, there were one or two in the
22 entire group that were identified. And I can go

1 back and check on the exact number --

2 COL GIBSON: There was -- when we had
3 this cumulative risk ratio, the -- and I agree
4 your methods were pristine, very nice. But you
5 have -- we have quite a bit of difference in the
6 time in service for these two cohorts. The issue
7 is cumulative risk over time. They're --
8 obviously, they've been in longer. The Army was
9 in longer. And you use the covariate of rank to
10 look at that. I was -- I guess I'm just a little
11 surprised. I would have expected the opposite to
12 go into the -- into the model. But, good work.

13 CAPT BLOOM: Thank you, sir. We can
14 discuss more after. That's a very interesting
15 point as well.

16 DR. POLAND: Dr. Shamoo?

17 DR. SHAMOO: I realize all
18 epidemiologists -- almost all of them use race as
19 one of the parameters. And I'm all the time
20 uncomfortable with that for a variety of reasons.
21 One, I think it's stigmatizing. Second, it's
22 inaccurate, especially in this day in age of

1 genetic sequence, especially for
2 African-Americans. The genes which controls
3 pigment has very little to do with all the rest of
4 susceptibilities.

5 And genetic sequence is becoming cheaper
6 and easier and faster. And my thinking is when
7 would the epidemiologists start thinking and
8 moving away from using really the race as one of
9 the parameters. Because what do you consider
10 race, one over thirty-two, one over sixteen, or
11 homozygous, only one out of one. It just makes no
12 sense. It's a terrible average and it's terribly
13 stigmatizing.

14 CAPT BLOOM: I couldn't agree more on
15 that issue. These were self-reported races.

16 DR. SHAMOO: I understand.

17 CAPT BLOOM: And reported in the
18 surveillance data, but I couldn't agree more with
19 you.

20 DR. POLAND: Dr. Silva, I don't want to
21 go deeper into that issue because it's not one
22 that's going to get fixed her today, so --

1 DR. SILVA: Oh, I know that. But, I
2 think setting this committee up for future
3 thinking and our preventive officers. I mean the
4 time has come to start using this arbitrary
5 designation.

6 And I got home last week and I found out
7 our students of the University of California, all
8 252,000 decided race for Asians was very arbitrary
9 and they want a breakdown now into 16 or 18
10 different categories.

11 So, we're not going to solve it here
12 today.

13 DR. POLAND: Okay. Dr. Parkinson?

14 DR. PARKINSON: I'm just scratching my
15 head looking at this 62 percent difference just
16 like everybody around here. And what I --
17 sometimes I just -- just basic blocking and
18 tackling. Are we confident that our coding, the
19 way the Navy codes and the Army codes are both
20 equal here, I mean in terms of the way in which it
21 gets from the doctor's note into your database?

22 I mean, do we systematically go back and

1 quality improve that? I'll tell you, my own
2 experience is we take these numbers as gospel and
3 we don't dig behind what actually happened in the
4 clinic, so just to double check.

5 But, I mean, it's striking the
6 difference and I'm sitting here scratching my head
7 saying why in the world would it be so different.
8 Because screening issues aside, I can tell you
9 there's not 100 percent compliance with any
10 doctrine that comes out of DOD or for that matter,
11 Bumed.

12 So, I don't -- I'd just ask us to go
13 back and look at the accuracy and the quality of
14 coding practices across the two services and the
15 guts of how it actually works -- just a thought.

16 DR. POLAND: Dr. Oxman?

17 DR. OXMAN: Is there any difference
18 between the cultural availability, if you will or
19 the stigma or lack thereof of going for an ob/gyn
20 symptom-driven visit in the Navy and the Army?

21 CAPT BLOOM: That's an outstanding
22 question. I have no idea. Would you repeat that?

1 DR. OXMAN: I just wonder --

2 DR. POLAND: Turn your mike on.

3 DR. OXMAN: I wonder whether there is
4 some difference in the likelihood that a
5 moderately symptomatic woman would seek care,
6 ob/gyn type care in the Army versus the Navy,
7 whether there's a different stigmatization or some
8 philosophic difference that could account for
9 that.

10 CAPT BLOOM: That's an incredibly good
11 question. Let me add this on top of that. Most
12 of these -- most services -- the services have a
13 policy for annual reproductive screenings. In
14 most cases, they have some method locally, not
15 generally, but locally to -- to make sure the
16 appointment is kept for they -- for your annual
17 pap smear.

18 That in itself would tend to lessen the
19 issue of cultural differences, granted they have
20 to -- you know, a woman who is symptomatic has to
21 present so at least annually. Please, go ahead
22 and add to my --

1 DR. POLAND: Do you have anything
2 pertinent to that? Did you have a comment
3 pertinent --

4 MS. HITCHCOCK: I do. Good morning. My
5 name is Penny Hitchcock. I'm the former chief of
6 the Sexually Transmitted Disease Branch of the
7 National Institutes of Health, and it was under my
8 tenure that the daily school study was done in
9 Seattle, which showed a 41 percent reduction in
10 PID if you screened women who came in to a clinic
11 with a risk profile and treated for chlamydia as
12 opposed to waiting for women to come in with
13 symptoms that are consistent with PID.

14 So, let me say that I completely
15 empathize with the discomfort with respect to
16 racial issues. However, it has -- back to
17 Tuskegee, racial issues have been a valid
18 parameter and predictor of sexually transmitted
19 infection.

20 And I think that one of the questions
21 that was asked here towards the end is really
22 important insight. Both access to care as well as

1 insurance affect people who are marginalized both
2 socially and economically from seeking care. And
3 time and time again, the manifestation of chronic
4 disease is higher in African-Americans primarily
5 for that reason.

6 Now, although the military is colorblind
7 with respect to providing care, we're inheriting
8 infections when people enlist. And I think it's
9 really important -- another point that was made is
10 to screen regularly and early on to try to
11 understand this better and to try to develop and
12 effective intervention strategy.

13 Just a couple of more points if you --
14 DR. POLAND: Very brief, please.

15 MS. HITCHCOCK: I think that the issue
16 with mean is extremely important. Recent papers,
17 there are now four of them in literature to
18 suggest that serology for chlamydia trachomatis is
19 a predictor of infertility in a marriage whether
20 or not the woman is sero positive.

21 And I think as soon as we see mean as a
22 key part to preventing and controlling

1 infertility, in this case cabbett tests, we are
2 not going to be able to solve this problem.

3 So, there are new tests coming on board,
4 rapid tests. And with the use of erythromycin, I
5 think we have the tools to deal with this.

6 The question is -- to use your quote,
7 which I liked a lot, can we use this peculiar set
8 of circumstances to help rethink our strategy
9 here. Thank you.

10 DR. POLAND: Thank you. Colonel
11 Defraities, you, I think, wanted to make a
12 presentation.

13 SPEAKER: Yeah. Thanks very much. As
14 Mike mentioned, he was on active duty with the
15 Army medical surveillance activity for the last
16 year and just recently decided to seek his fame
17 and fortune, such as it is, in academics. He's
18 always welcome back. And to that end --

19 COL GIBSON: They give good haircuts.

20 SPEAKER: Yeah, really. He has got his
21 hair cut already, so he's able to come back on
22 active duty. We did have an award that we didn't

1 get an opportunity to present him. And just keep
2 your seats but please tend to the orders.

3 The Department of the Army, this is to
4 certify that the Secretary of the Army has awarded
5 the Army Commendation Medal to Captain Michael D.
6 Bloom, United States Army Center for Health
7 Promotion and Preventive Medicine for meritory of
8 service while assigned as a senior epidemiologist
9 at the Army Medical Surveillance activity.
10 Captain Bloom's epidemiological expertise, hard
11 work, and outstanding initiative were instrumental
12 in the continued success of EMSA and the Defense
13 Medical Surveillance System at a time of severe
14 resource shortages. His performance reflects
15 great credit upon him, the United States Army
16 Center for Health Promotion, the Army Medical
17 Department, and the U.S. Army from 1 November,
18 2006 to 31 October, 2007, given under my hand in
19 the city of Washington this 24th day of October,
20 2007, Michael V. Kates, Brigadier General,
21 Veternary Corps commanding U.S. Army Center for
22 Health Promotion and Preventive Medicine. Thanks

1 very much.

2 (Applause)

3 CAPT BLOOM: All right.

4 SPEAKER: I won't poke a hole in your
5 nice suit here. Army -- field expedient clip
6 here, so.

7 CAPT BLOOM: Great. Thank you very
8 much.

9 COL GIBSON: There's a citation in the
10 orders, very important to get these orders to you
11 too so you can put that on your records.

12 CAPT BLOOM: Yes, sir. Thank you very
13 much.

14 DR. POLAND: Congratulations.

15 (Applause)

16 DR. POLAND: Our second speakers this
17 morning are Dr. Ben Diniega -- Welcome back, Ben
18 -- Dr. Kelley and Colonel Kugler. They'll provide
19 a briefing on chlamydia screening compliance and
20 again, their information is under tab 8.

21 DR. DINIEGA: Dr. Poland, members of the
22 board, service liaisons, and members of the

1 audience, it's my pleasure to be here to address
2 the ward. As a former executive secretary for the
3 AFEB, this is the first opportunity I've had to
4 address the transformed Defense Health Board since
5 I retired in 2003.

6 Many of the things that I'm going to
7 show on the slides have already been eluded to or
8 mentioned. So, I'm basically introducing some of
9 the issues and then -- the meat of the matter will
10 be a presentation of a study done by the national
11 quality management program for the military
12 healthcare system.

13 These are the prior U.S. Preventive
14 Service Task Force and CDC recommendations. These
15 have been updated and you'll see the updates not
16 much different in a later slide.

17 In May 25, 1999, a recommendation was
18 made by the AFEB and there are some of the older
19 members -- elder members of the board still
20 sitting here.

21 DR. POLAND: Long standing members.

22 DR. DINIEGA: Senior members. But as we

1 all know, it was to screen all female recruits as
2 early as possible and recommended to do it during
3 the recruit training. But also it was acceptable
4 at that time, the recommendation said, to do it
5 within the first year of accession and then for --
6 in following the U.S. Preventive Health Services
7 Task Force to do an annual screen at the time of
8 the pap smear.

9 This slide just shows numerous
10 communications from the AFEB to Health Affairs
11 mainly asking for updates of implementation of the
12 policy and additional information about chlamydia
13 monitoring, which is very difficult as you'll hear
14 later on at this stage.

15 The allusion that was made -- the
16 mentioning of the laboratory data is called -- is
17 contained in what's called in the information
18 management, information technology world for DOD,
19 block 3 and that's to a database and data system
20 to collect all of the laboratory data. That piece
21 is under discussion right now to being funded and
22 moving forward to be implemented. So, we still

1 don't have that database and data collection
2 system.

3 The communications between the AFEB and
4 Health Affairs focused on monitoring compliance
5 due to policies as we all should do and also,
6 taking a look at whether or not it was worth the
7 squeeze to do screenings early.

8 These are the current U.S. Preventive
9 Services Task Force and the CDC recommendations.
10 Both years, they were A recommendations and highly
11 recommended.

12 These are the current service policies.
13 The information was provided by the service
14 liaisons. Pay close attention to the
15 implementation dates. You'll see that some of
16 them have been rather recent. The Navy recruits
17 all go to great lengths and they've been doing
18 chlamydia screening with cultures since 1994 until
19 this past midyear, and then they started using the
20 urine application tests.

21 The Marines use cultures. They train at
22 Paris Island. And they've been doing this since

1 1997. The Air Force did -- implemented urine
2 testing of female recruits since 2005, Coast Guard
3 since 2004. And the Army does theirs in
4 conjunction with the pap smear at their first duty
5 assignment.

6 This means that the female recruits will
7 go through basic training and advance individual
8 training, and then when they get assigned after
9 their training is complete, then they'll get it as
10 part of the female wellness check up.

11 This just lists the letters that Health
12 Affairs -- the ASD Health Affairs responded back
13 to some of the communications from the AFEB. The
14 most recent communication talks about the services
15 have complied with the recommendations as was
16 stated in 1999, but it also mentions some of the
17 current initiatives which are to take a look at
18 DOD metrics for chlamydia screening and to do a
19 study under the National Quality Management
20 Program looking not only at compliance but a
21 little bit at some of the potential complications
22 of STIs.

1 I'll be followed here by Dr. John Kugler
2 from the Office of the Chief Medical Officer who
3 also chairs the Scientific Advisory Panel to the
4 National Quality Management Program, which
5 conducted a study of chlamydia screening among
6 active duty women looking at screening compliance
7 at recruit training and with the service policies
8 for accessions and also the annual screening.

9 Dr. Kugler?

10 COL KUGLER: And I'll be brief. My job
11 is really to review for you the role of the
12 National Quality Management Program -- uh-oh.

13 SPEAKER: That's okay.

14 COL KUGLER: To describe briefly the
15 role of the National Quality Management Program
16 and the quality program within the military health
17 system and its overarching approach and then where
18 the special studies fit into that and how we came
19 about to commission the study on your behalf.

20 The NQMP has a history that actually
21 predates 1996 in one form or another, but the NQMP
22 program itself was formally a result of a DOD

1 directive in 1996, which was to support the
2 independent and impartial evaluation of selected
3 aspect of healthcare performance and it's managed
4 out of our office at -- the TMA Office, the Chief
5 Medical Officer.

6 There are four major functions of the
7 program, monitoring Orix measures in our inpatient
8 facilities, selected balanced scorecard measures,
9 other, both a combination of HEDIS and Orix
10 measures or non-core Orix measures, education
11 derived from learning from those performance
12 measures as well as the special studies and the
13 special studies themselves which are administered
14 -- a part of the scientific advisory panel, which
15 is a tri-service panel that commissions the
16 quality studies.

17 This is just a mishmash of the various
18 components of the MHS clinical management program
19 and relevant for us is over in the clinical
20 quality measures division, the special studies,
21 which is a key component of the feedback loop for
22 quality management within the MHS.

1 And this is just a diagram of
2 information flow so that the -- it's clear how
3 performance improvement and quality information
4 such as this, readiness for flow within the MHS.
5 Scientific Advisory Panel is underneath the
6 Tricare quality clinical forum, and that -- it
7 feeds the results directly into that forum.

8 The forum is composed of, again, members
9 of the three services, quality representatives and
10 representatives from Health Affairs and TMA and
11 HBA and E. They basically review the products of
12 the Scientific Advisory Panel and the special
13 studies and will make recommendations.

14 It requires recommendations for further
15 senior leadership is made directly to the clinical
16 proponency steering committee, which is a
17 committee composed of the deputy surgeon generals
18 and the chief medical officer. And they will
19 either endorse or add feedback to our
20 recommendations. From there, it goes to most
21 senior MHS leadership, Dr. Cascells and the
22 surgeon general. And it has Ds at the smack

1 level.

2 They also make recommendations downwards
3 and in the quality forum there are the senior most
4 quality reps representing the three services, so
5 they will -- they may have recommendations that
6 come up from the services or we will make
7 recommendations that will go out through those
8 reps through the services.

9 Many of the members of the Scientific
10 Advisory Panel also known as the Clinical Quality
11 Forum or they're not directly communicating with
12 them.

13 Also, just a illustration of the other
14 components of quality, one form or another,
15 patient safety, risk management, and the
16 operational aspect of execution of our plan, which
17 is carried out by the medical directors. Quality
18 issues come up from those folks as well, and they
19 are funneled into this -- into the program.

20 Any questions about the NQMP program
21 before I turn it over to our study?

22 Okay. It's my pleasure to introduce Dr.

1 Joe Kelley, who is retired Army, who on behalf of
2 Ben Diniega and of this board, we asked our
3 partner to commission a study to look at chlamydia
4 screening and part of that is the direct policy
5 implication and the differences in the three
6 services.

7 So, Joe?

8 DR. KELLEY: Okay. Thank you Colonel
9 Kugler. Thank you for the opportunity to present
10 some of the results of the study that we --

11 DR. POLAND: Joe, you'll need to speak
12 up.

13 DR. KELLEY: Okay. Can you hear me now?
14 Is that better? Holy smokes, okay.

15 I'd like to thank you for the
16 opportunity to speak about the study that we have
17 completed. We've completed the work. We have not
18 completed the final written report for submission
19 to Colonel Kugler's office. And I'm telling you
20 that because when that's done, any of you will be
21 able to obtain a copy of the report.

22 So, if you find this information

1 interesting, compelling, probably in a month or
2 so, we expect that that full report will be
3 available.

4 COL KUGLER: I would also add that the
5 feedback today is important to this report as
6 well.

7 DR. KELLEY: We conducted a study on
8 chlamydia screening in active duty women primarily
9 to examine the compliance of the chlamydia
10 screening with policy and the different services.
11 And we also wanted to look at the relationship
12 between adverse outcomes from chlamydia infections
13 and the screening patterns that we observed in the
14 women.

15 Okay. This is simply an information
16 briefing for the board. As a little background,
17 Dr. Bloom has --

18 (Interruption)

19 DR. KELLEY: -- and it does have a high
20 prevalence rate in the military. Also, there are
21 DOD policies in place that Dr. Diniega has already
22 spoken about, but they're also listed on this

1 slide.

2 And the final point of information and
3 background is, and you all know this very well,
4 the Defense Health Board has had recommendations a
5 couple of times relating to screening of active
6 duty women on chlamydia.

7 What I'd like to do is run through a
8 series of slides to present the findings of the
9 study. And what this slide displays is just the
10 areas that we're going to try to hit. Primarily
11 what I'm going to be talking about is the findings
12 related to policy, to prevalence, and to PID, to
13 make it to three P's.

14 But it wasn't just PID. We looked at
15 PID, we looked at ectopic pregnancies, and also at
16 infertility. The data sources that we used for
17 this study were the -- were number one, data from
18 the defensemen power data center. We used them to
19 identify the women who were in the fiscal year
20 2005 accession cohort. That's all women who came
21 into the military for the first time during that
22 year.

1 We also acquired data on chlamydia
2 screening from the population health support
3 division, which I believe has changed its name.
4 And Colonel Bonnema will be speaking a little bit
5 later. He can correct me on that.

6 Also, we had -- we obtained data from
7 the MHS data repository. And that data was the
8 data that we acquired on PID and the other adverse
9 outcomes.

10 The final piece of -- the final area
11 that we went to, and it was a little bit odd, was
12 the health clinic at Great Lakes. And we found
13 that we had to go to them for data because the
14 data that were provided to us by Dr. Bonnema's
15 office, we thought were complete in terms of
16 having laboratory screening data for all of these
17 women for all services.

18 When we analyzed it, we found that there
19 was a large hole in the data related to the
20 accession screenings -- or the recruit screenings
21 that were done on Navy women. So, we had to send
22 out a special request to get data from them.

1 Now, as I said, the study population
2 contained all of the female accessions for fiscal
3 year 2005 that were 25 years or less. And for
4 this group, we also only looked at women who were
5 on -- who came into active duty. We did not look
6 at Guard and Reserve for the same reasons that Dr.
7 Bloom has already mentioned.

8 We followed these women through March of
9 2007. And we picked that as an endpoint for
10 convenience. We wanted to go as long as we could,
11 get as long a time frame as we could and still
12 collect complete data from the MDR.

13 And lastly, there's a breakdown of the
14 slides -- or breakdown of the population. We
15 identified 22,283 women. And as you can see, the
16 Army had the largest group. That's about 43
17 percent of the accessioned cohort. The Navy --
18 the Marine Corps had the smallest group. That's
19 about 10 percent of the accessioned cohort.

20 In terms of screening, the first bit of
21 analysis that we did was to identify women who
22 were ever screened during the period of time that

1 we looked at them. So, this could be a period as
2 short as about 18 months or as long as about 30
3 months, depending on when the women came into the
4 military.

5 And what we found is that approximately
6 79 percent of all women who entered the service
7 during that year had a chlamydia screening at
8 anytime that we could find, one or more screening,
9 which means that about 21 percent of the women we
10 could find no record of them having any screening
11 whatsoever.

12 When we looked at those that were
13 screened versus not screened based on the usual
14 demographic variables, we found no differences
15 there. The difference that we found was based on
16 the service that the woman had entered.

17 And you can see from this slide that for
18 the Army only about 70 percent of the women had a
19 screening in that roughly two and a half year
20 period. And on the high end, the Navy -- for the
21 Navy, we could find screenings for about 91
22 percent of the women.

1 To go a little bit more into the
2 screening of these women, we tried to characterize
3 them -- their screenings as either an initial --
4 as to whether they were screened initially or
5 whether they were screened annually. When we
6 looked at the group, and this a group of
7 approximately 17,000 women who had any kind of
8 screening, we found that about 14,000 of them had
9 an initial screening.

10 And that initial screening is described
11 as either for the Marine Corps and for the Navy,
12 that would have been a screening during the first
13 60 days. They normally get screened when they
14 come into the service, during the first week or
15 two, during the first couple of weeks. We gave --
16 we gave them the luxury of getting screened the
17 first 60 days.

18 For the Army and the Air Force, the
19 period that we gave them for initial screening was
20 one year. And the data that we used for this
21 study were collected before the Air Force made
22 their change to screen women in basic training.

1 And as you can see from the results,
2 when we look at initial screening, based on
3 service policy, the Navy still did not screen
4 approximately 20 percent of the women or looking
5 at it the positive side, they screened
6 approximately 80 percent of the women in basic
7 training and the Marine Corps wasn't far behind.

8 The Army and the Air Force screened
9 between 50 and 60 percent of their women within
10 the first year. And when we looked at that and
11 spread it out and when we looked at it on a
12 monthly basis, we found that there were a number
13 of women in the Army who were screened during the
14 first two months of service, which means that they
15 were screened sometime in basic training.

16 We didn't do any further analysis on
17 that, but I thought that that was interesting
18 information. They were -- we assume that they
19 were probably screened for cause, that they were
20 screened during basic training. There was
21 something that made them go for healthcare.

22 When you look at the annual screening

1 rate, I think that that was a little bit more
2 disappointing. Overall, annual screening wasn't
3 accomplished on 50 percent of the women. And for
4 annual screening, we were -- I thought we were
5 fairly generous. We looked at the accession date
6 and we gave them not 12 months for an annual
7 screening, but we gave them a 14-month window for
8 every annual screening figuring that sometimes you
9 don't quite make it in 12 months. So, but 14
10 months was enough.

11 And for the annual screening -- so, for
12 some of these women who received the annual
13 screening, if their accession date was early and
14 in -- in fiscal year 2005, they could have
15 potentially been screened three times during the
16 study period, during 30 months. If they were --
17 and if they came in on the late end, it wouldn't
18 have been that many.

19 So, looking at it, about half of them
20 got screened. And if you look at it as well by
21 service, the Marine Corps seems to have done,
22 compared to the other services, reasonably well.

1 Now, I don't know if that -- if 68 percent makes
2 policymakers happy, but it's clearly -- clearly
3 better than any of the other three services.

4 Okay. This slide presents the
5 prevalence data and what I should tell you is that
6 there are -- there is a study period prevalence.
7 That's on the top row, 2005 through 2007, where we
8 asked did -- if the woman was -- had a positive
9 screening at anytime during the -- during our
10 study period. And for that, 15 percent of the
11 women in the cohort had at least one positive
12 screening at anytime.

13 We received a question and reanalyzed.
14 Based on a request from the staff, they wanted us
15 to look at annual prevalence, and so that's what
16 you find below in 2005, 2006, and 2007 annual
17 rates. So, a woman could have been represented in
18 one or more years in the fiscal year numbers.

19 The only thing I'd point out on this
20 slide is that the rate seemed to rise in 2000 in
21 the second year for all services. And of course,
22 when you look at slide again, the Army has the

1 highest rate of prevalence. The Marine Corps is
2 also high. The Air Force is -- has the lowest
3 rate, has the lowest prevalence.

4 And I think that the pattern of Army
5 being the highest, Air Force being the lowest, and
6 then the Navy -- or the Marine Corps and the Navy
7 being in there, that's -- throughout these slides
8 you will see that repeated for all of the other
9 slides as well as a pattern.

10 Then we looked at the adverse outcomes
11 that we thought were associated with chlamydia.
12 And again, we looked at adverse outcomes. They
13 could have been caused by another sort of
14 bacterial infection, gonorrhoea or something else,
15 but we identified the conditions based on ICD9
16 codes. We looked at PID, ectopic pregnancy, and
17 infertility. And this slide displays the
18 distribution of infections.

19 Overall, 1,146 infections were noted.
20 PID accounted for 90 percent of all the
21 infections. What I found surprising was that we
22 found any infertility, realizing that infertility

1 -- an infertility workup takes a little bit of
2 time, and we're only dealing with a two and a half
3 year period maximum. But we still had women who
4 were diagnosed with infertility.

5 Here again, when you look at -- when you
6 look at the different adverse outcomes. The Army
7 appears to have the highest rate of adverse
8 outcomes, and the Air Force has the lowest rate of
9 adverse outcomes in all categories.

10 I think this is the last piece of
11 information that I'll present. And I -- what I
12 decided to do for this one was show you -- focus
13 on PID and on PID rates. If you look at the
14 headings across the top, we have categories that
15 say initial plus annual, annual only, initial, and
16 no testing.

17 The initial plus annual is a category of
18 women for whom we found an initial test that met
19 their service policy, so for the Marine Corps and
20 Navy women, that would have been -- they would
21 have been tested during basic training. And we
22 found records for them as being annually tested.

1 They met the criteria for being annually tested.

2 The second group, annual only, we could
3 find no record of those women having been tested
4 within the service policy at the beginning of
5 service, but we found chlamydia testing done
6 annually.

7 The third group, initial only, they had
8 the first test, but we didn't find any annual
9 tests. And the fourth category, I call it no
10 testing to save space here. That's not
11 technically correct. The women in that category
12 could -- some of them had no test. And we know
13 that approximately 5,000, 5500 had no test we
14 could find. But there's also a small group in
15 there that could have been tested, but it didn't
16 meet the criteria for either annual testing or
17 initial testing.

18 And when we look at this, what we find
19 -- and this is also -- the display is done and the
20 data is presented a little bit differently for
21 this, we present it as cases of the condition per
22 1,000 population.

1 And so, what we find is that overall if
2 you combine all three types of -- I'm sorry. This
3 is just -- if you're looking at PID, what we find
4 is that approximately -- you have 51 cases per
5 1,000 overall, across all services.

6 We found that most of the cases, though,
7 were in the group that were tested initially
8 according to policy and also had an annual test.
9 What we think this really represents is that the
10 women who had a health issue would come in and
11 they were tested, but the testing was not done as
12 a screening test.

13 A lot of these women qualified on an
14 annual test because they were -- they were tested
15 for diagnostic confirmation when they had a health
16 condition. We haven't been able to confirm that
17 but we suspect that that is probably what
18 happened. And you can see that the women who had
19 no testing done at all had the lowest rate of PID.
20 And here again, Army has a much higher rate than
21 the Navy, Marine Corps, or the Air Force.

22 Okay. In summary, the overall screening

1 rate for the services for everyone was 65 percent.
2 The Navy screened -- did most initial screening.
3 The overall annual screening, which was somewhat
4 disappointing was only about 49 percent. The
5 Marine Corps did the best there. Overall at some
6 point during service, about 80 percent of all
7 women had at least one test.

8 In terms of infections, if you look
9 across the entire study period, about 15 percent
10 of the women had a -- had an infection at anytime.
11 And the annual rates varied with the Army being
12 the highest up around 13 percent. And
13 additionally, Army appeared always to have the
14 highest rates and the Navy -- the Air Force, the
15 lowest.

16 As far as the adverse outcomes are
17 concerned, I've already said that 90 percent of
18 those were in chlamydia. And again, adverse
19 outcome rates were the highest for the Army and
20 lowest for the Navy.

21 What we took away from this is that we
22 think that somehow emphasis needs to be placed on

1 screening in the services. Clearly, we have
2 service policies and service policies for whatever
3 reason aren't -- the goals aren't being met. So,
4 that would be one obvious recommendation.

5 Another is we think that based on this
6 that we probably do need to start testing women in
7 the Army during basic training simply based on the
8 amount of disease going on. And I think that's
9 it.

10 Are there any questions? Yes?

11 DR. POLAND: Yes, Dr. Walker?

12 DR. WALKER: Do we know anything about
13 whether the positive screening is followed up and
14 what the -- the proportion of those that are
15 followed up or treated and what the outcome is of
16 the treatment.

17 DR. KELLEY: We do not know that. Our
18 assumption or hypothesis going in was that for
19 women who are identified as being positive that
20 they will be treated.

21 DR. POLAND: Dr. Gardner?

22 DR. GARDNER: Yeah. Just to follow that

1 same line and to follow the recommendation that
2 you made in your letter, Greg, in the December
3 '05, you know, the last action item is assessing
4 the effectiveness of male chlamydia screening
5 options, it seems to me, in STD guidelines,
6 clearly once a woman is identified as having
7 chlamydia, male partners are identified as to be
8 notified and treated. And we have no idea as far
9 as I can tell whether that's being done.

10 I've not heard a single word about male
11 -- notification of partners, and there might be
12 significant differences in the different services
13 as to how actively that's pursued.

14 So, I think that clearly needs to be one
15 of our recommendations --

16 DR. KELLEY: Yes, okay.

17 DR. GARDNER: -- that at least we follow
18 established guidelines for notification treatment
19 of partners.

20 The other thing that I'd like to hear a
21 little bit more about in the screening -- and the
22 table here tells that -- says that there had been

1 male screening, the leukocyte esstrays. I'd like
2 to hear somebody refresh me as to what the
3 sensitivity and specificity of that is a test, but
4 it's an easy test to do.

5 And since this is entirely a
6 heterosexually spread disease, it always bothers
7 me when we just treat one of the genders and don't
8 pay any attention to the other. So, it seems to
9 me that like -- it's just putting urine in bottle,
10 that's not much of a problem of getting a
11 specimen.

12 DR. POLAND: Does anybody know the
13 answer to that question, sensitivity and
14 specificity?

15 DR. GARDNER: Yeah, please.

16 SPEAKER: It's high.

17 SPEAKER: A number of years ago Dr.
18 Julie Schachter at University of California San
19 Francisco, who was really one of our best
20 (inaudible) --

21 DR. KELLEY: Uh-huh.

22 SPEAKER: -- did this evaluation and it

1 is 50 percent sensitive and 50 percent specific.
2 In other words, you can flip a coin, and you're
3 just as likely to have an answer with respect to
4 male infection. It's just not very good.

5 DR. GARDNER: Not so good, so
6 ineffective as a screen. Would it identify people
7 for follow up? Could you use that as a screen
8 test for a follow up test and if so, what would
9 you do?

10 SPEAKER: Well, I guess the question is
11 if you're going to meet half the people who have
12 some white cells in their urine with this test,
13 perhaps you might get a better result with say a
14 urine based PCR assay afterwards, but I think
15 you're still talking about the limitations of your
16 initial screening tests.

17 Again, I think urine based screening for
18 men and vaginal swabs for women are with PCR, it's
19 clearly the best. And there are some rapid tests
20 that I think are going to give us more cost
21 effectively to get at that.

22 DR. POLAND: Okay. Dr. Lednar?

1 DR. LEDNAR: Wayne Lednar. I have a
2 question about the data that were available to you
3 for urinalysis. You mentioned one of the early
4 slides in your deck the data sources. And I'm --
5 I'm just not able to tell from this information.

6 Did you have access to clinical
7 encounters that would have occurred outside the
8 military that perhaps would have come in via
9 Tricare? Was that part of your data capture?

10 DR. KELLEY: We would not -- no, that
11 was not part of data capture.

12 DR. LEDNAR: So, to the extent that any
13 of the women either were not at a military
14 facility where this was possible to screen and
15 they needed to rely on out of military care, you
16 just wouldn't have access to that experience.

17 COL GIBSON: Let me add to that. These
18 are active duty females, so they are at a military
19 installation or deployed or on a ship.

20 DR. LEDNAR: With the capability to --

21 COL GIBSON: With the capability to do
22 that. We know that it's -- we know that some of

1 our enlisted force believe that -- and certainly
2 our officer force believe that a diagnosis of a
3 sexually transmitted disease in a medial record
4 may impact their career. That's the perception.
5 Don't know how much reality there is to that; I
6 don't think any.

7 It is likely that some of these folks,
8 particularly if they were symptomatic, would go
9 downtown for care so that it wouldn't show up in
10 their medical record. That's possible.

11 DR. LEDNAR: So, there's a potential for
12 ascertainment by --

13 COL GIBSON: Exactly.

14 DR. POLAND: Yes, Dr. Halperin?

15 DR. HALPERIN: Is this like Dr. Bloom's
16 study ecologic? That is, did you have data on the
17 individual participants, whether they had PID,
18 when they were screened?

19 DR. KELLEY: Yes.

20 DR. HALPERIN: You did. So, you could
21 do the nested case control study looking at --

22 DR. KELLEY: Yes. We've not -- we've

1 not done that analysis. And typically, what we do
2 on our contract is when the study is turned over
3 to TMA and they're satisfied with it, we also turn
4 over the data set with that. So, there would be a
5 data set available for secondary data analysis.

6 DR. HALPERIN: That would be done by
7 DOD? Is that --

8 DR. KELLEY: That could be done by
9 whomever. Probably, yeah, I would think that
10 maybe AMSA would be the most logical organization.

11 DR. POLAND: Colonel Gibson?

12 DR. HALPERIN: I really encourage going
13 in that direction because it will answer some of
14 these questions about when the screening should be
15 done or at least what the association is when it's
16 done versus the outcome. It will also answer the
17 question of whether after adjusting for that,
18 whether there really are differences between the
19 services, which --

20 DR. KELLEY: It's, you know, possible.
21 That's an issue that -- that -- I know that we
22 discussed it and discussed doing that, but in

1 point of fact, we didn't receive data from the
2 Navy at Great Lakes to even fill this out until
3 October, so --

4 DR. POLAND: Colonel Gibson and then Dr.
5 Parkinson.

6 DR. KELLEY: -- it's relatively new.

7 COL GIBSON: Go to slide 12 just in your
8 books, if you -- you notice there's a -- I lost
9 it. There it is. The rates of screening run from
10 about 68 percent to 41. Keep this in context with
11 the data that you were provided back in 2005 when
12 we were dealing with this issue that showed that
13 that chlamydia screening rate was 30 off the chart
14 audits.

15 So, at least -- we either have a more
16 accurate method of ascertainment than chart audits
17 or we've in fact improved our screening rates over
18 that period of time.

19 DR. KELLEY: And the HEDIS measure
20 hasn't changed that much in that time.

21 DR. POLAND: Mike?

22 DR. PARKINSON: Yes. I just -- first of

1 all, I wanted to commend the work. I think this
2 is the essence of quality improvement. And while
3 it's obvious to this group we don't do it enough,
4 which is look at policy, its implementation, its
5 impact, and then convene the stakeholders to model
6 a best practice or continue to get better. And I
7 stay the course because oftentimes what happens is
8 we know -- we do the study and it dribbles away
9 and we lost the exclamation point, which is the
10 point of quality improvement.

11 So, I do hope -- and again, Colonel
12 Stanek and I had the opportunity to provide some
13 high level, you know, input to the study early on,
14 which we appreciate. So, good job on the whole
15 thing.

16 DR. KELLEY: Thank you.

17 DR. PARKINSON: But in the
18 implementation of quality improvement, I would
19 urge us to look at the two arms of this, which are
20 recruit health and the policies and practices in
21 the recruit training bases and the core military
22 health system.

1 And I'm concerned that with the atrophy,
2 what I understand or perhaps the lack of attention
3 to the recruit health forum, where we basically
4 can model best practices across all the service
5 and say why does the Marine Corps have 81 percent,
6 you know, let's really dig down and do that. And
7 is it something we wanted to look at in the Air
8 Force or the other services.

9 Likewise, what is going on with annual
10 screening in the direct care services in Army MTF
11 versus, you know, a Navy facility? We really need
12 to hone down on those to continue to drive
13 improvement because -- because of our population,
14 because we take all these young men and women and
15 it's so highly prevalent.

16 So, good job. Let's not drop the ball
17 on the recruit health or on the mainstream
18 healthcare. And let's continue to move it
19 forward. And we should do it -- I mean, these
20 numbers -- yeah, we can always say the glass is
21 half empty. I think it's more than half full.

22 It's great. We're moving forward.

1 Let's keep it going. So, don't misconstrue our
2 comments here today to be anything but --

3 DR. POLAND: I'll have a different take
4 on that in just a moment.

5 Colonel Defraities?

6 COL DEFRAITES: A question and a
7 comment. Will you -- you mentioned that you were
8 concerned about the level of ascertainment of the
9 data for the Navy, so you went directly to the
10 source. They have one basic training
11 installation, and you got the data directly from
12 them.

13 Were you concerned about the
14 ascertainment or completeness of data from the
15 other services? What led you to believe that the
16 others were complete? That's a question.

17 The comment was just in testing the
18 partners -- I know you know this already, but just
19 to remind ourselves that the recruit population --
20 this is not a closed population. They sort of
21 come in trailing clouds of glory as they come from
22 all over the United States.

1 And so, the contact tracing, which I'm
2 sure the Navy -- I mean, the Navy Great Lakes,
3 they could probably tell you exactly how they do
4 it, but again, it would involve calling the home
5 station or at least that contact tracing. It's
6 not just looking at other recruits that happen to
7 be at Fort Leonard. The contacts would be
8 somewhere else, so just to keep that in mind.

9 After -- when you get on active duty and
10 assigned to an installation, then it tends to be
11 more local. You still have, you know, interfaces
12 with the local county and health department, but
13 it tends to be more of a local phenomenon. That's
14 all.

15 DR. POLAND: Okay.

16 DR. KELLEY: An answer to the question,
17 the data source that we have gone to in the past
18 most often is Colonel Bonnema's shop down in San
19 Antonio. And we know that their data are -- have
20 in the past -- we've never questioned their
21 reliability and completeness because they get
22 feeds from CHCS out of the different platforms.

1 For some reason, they did not get a feed
2 from Great Lakes because we -- there was an issue
3 with it because we found no data at Great Lakes.
4 It wasn't as if we found a couple of women. There
5 was simply -- there were simply no test results
6 for anyone that we could tag to the Great Lakes
7 facility. So, something had to be wrong.

8 We went back to Great Lakes and we
9 worked a data use agreement with them to provide
10 their laboratory data. And I'm assuming because
11 of our longstanding relationship and the work
12 we've done with PHSD, all the other data were
13 good. And maybe Colonel Bonnema and talk about
14 that.

15 DR. POLAND: We're running a little
16 late, so I want to keep the comments very tight
17 and focused, please.

18 Dr. Stanek?

19 COL STANEK: This is Colonel Stanek. I
20 just wanted to first thank the group for doing the
21 studies and all the information on chlamydia.
22 This is an ongoing issue that continues, will

1 probably continue for quite a while also.

2 I wanted to point out one issue that's
3 changing in the future for the Army. The policy
4 as it was described is correct. We do have -- our
5 policy is that the test be done during their first
6 year. Most often, it's the first duty station.

7 However, I wanted to point out that
8 there's an initiative now that will probably take
9 effect in -- this coming April, April of '08. In
10 Colonel Diniega's slide, he said that screening
11 for the Army would start in the recruit training
12 in spring of '08. That's not quite correct.

13 In the spring of '08, there's an
14 initiative that's going to be started which will
15 have a women's health initiative encounter, if you
16 will, at the advanced individual training site.
17 Now, they go to basic training for 9, 10 weeks,
18 and then they go get their specialized training,
19 and then they go to their first duty station.

20 And part of the thing that the Army has
21 discovered in -- is that soldiers need to be ready
22 to deploy once they get to their first duty

1 station after they complete their advanced
2 individual training and part of that is having a
3 current pap smear in their record that's completed
4 and resulted and all that sort of thing.

5 You know, so there will be an initiative
6 to be done at all of the advanced individual
7 training sites where we have female soldiers, and
8 that will include the -- having the pelvic exam
9 and the pap smear done at that particular point
10 and during that encounter also they will receive a
11 chlamydia screening as well as any preventive
12 services or recommendations that need to be done.

13 So, that should start April -- spring of
14 '08 and then go on from there.

15 DR. POLAND: Tom?

16 LT CDR LUKE: Yes, sir. My name is
17 Lieutenant Commander Luke. In 2005, I presented
18 to the board on data about chlamydia prevalence
19 rates at Navy and Marine Corps recruit stations.
20 And the rate was five to nine percent point
21 prevalence.

22 And the discussions that we had right

1 there is -- as I recall, is the real lack of any
2 type of screening program in our male population,
3 such that some of the data I presented then is
4 that our women's health branch had done a survey
5 of unmarried, pregnant naval service members and
6 it indicated that about 80 percent of their
7 partners were other active duty members.

8 And I think that we can increase
9 certainly the screening and the efficacy of our
10 screening programs in women. But without a policy
11 for our young men, I think ultimately we're not
12 going to be very successful.

13 And I'll relate a couple issues here,
14 former enlisted and in the first five years of my
15 active duty time, I moved seven times. It is a
16 very mobile population that are coming together
17 and moving out. And I think that the board should
18 really take a look at what we're doing with our
19 young men, the 80 or 90 percent of our population
20 that are frankly the root cause of the infection
21 in women.

22 We just cannot succeed with only going

1 by U.S. Task Force recommendations for screening
2 of women. We have to look and consider the men if
3 we want to resolve and solve this epidemic. Thank
4 you.

5 DR. POLAND: Okay. We're going to need
6 to move on here. Let me ask now our third
7 speaker, Lieutenant Colonel Albert Bonnema, chief
8 of the Clinical and Phermatics Branch at the
9 Population Health Support Division, Brook City
10 Base, Texas, who will give us a briefing on DOD
11 population health metrics for chlamydia. And his
12 slides are under tab 9.

13 LT COL BONNEMA: All right, good
14 morning. And Colonel Gibson, thank you for the
15 opportunity and the invitation to present before
16 the board this morning.

17 The topic that I'd like to talk about
18 this morning is about the quality improvement
19 portion for Dr. Parkinson. The -- we are going
20 to begin doing chlamydia metric ascertainment,
21 measurement on a monthly basis beginning this
22 coming month. And so, what I'd like to do is show

1 you a little bit about what we've done here and
2 explain this in terms of the HEDIS methodology.

3 HEDIS is the health employer data
4 information set. It's from the National Committee
5 of Quality Assurance. This is the group that uses
6 secondary or administrative data primarily for
7 quality outcomes.

8 It's -- we use it to benefit in some
9 other studies, you know, maybe a little bit of
10 epidemiology and other quality studies within the
11 office. But this is purely within their
12 particular methods. And they have very specific
13 technical specifications for which we've adhered
14 to very closely.

15 The group that we're talking about here
16 in this case is going to be the women 16 to 25
17 years old who've been continuously enrolled to an
18 MTF. So, these folks have got -- before we first
19 measure them because we're now holding people
20 accountable, they've got to be within the control
21 of the group for about a year. So, we're only
22 going to hold people accountable for the group

1 after they've been there within the system for a
2 year.

3 And then we're looking for women with at
4 least one chlamydia test, and then we're looking
5 for the sexually active women, which is different
6 than many of the other methods. And in the
7 intersection there, we have the numerator and the
8 denominator.

9 To put that in terms here, the numerator
10 makes up the 16 to 25 year old women who've been
11 continuously enrolled with at least one screening
12 test for chlamydia in the past 12 months per the
13 U.S. Preventive Services Task Force guideline.
14 And the denominator is all sexually active women
15 who are 16 to 25 years old and are continuously
16 enrolled during the preceding 12 months.

17 We have a couple of exclusions for this,
18 and it does take out a few women. Number one,
19 it's those that have had pregnancy tests, because
20 that is an inclusion criteria for sexual activity.
21 But if the pregnancy test is only done within the
22 guise of an x-ray, so radiology exam or

1 prescription for Accutane, which is now the
2 mandated guidelines and there's no other inclusion
3 criteria, we exclude this group from the
4 measurement.

5 The determination of sexual activity is
6 the challenging part from administrative data.
7 And now that we've got 60,000 health risk
8 assessments done within the last year for active
9 duty, I'm looking forward to doing it from self
10 reported data instead.

11 But what we're looking for is for people
12 who are on contraceptive, IUD, diaphragm
13 prescriptions, some kind of contraceptive,
14 infertility or pregnancy or post-partum codes and
15 then some kind of lab test for pap smear,
16 pregnancy, sexually transmitted infection. This
17 actually brings in the majority of women in the 16
18 to 25 age group.

19 The -- I'm not going to go over this in
20 detail. This is the method in which we take and
21 build this particular metric and we've got seven
22 years worth of experience in doing this.

1 We're taking this from a vast majority
2 of administrative and clinical data sets,
3 radiology, pharmacy, clinical chemistry,
4 encounters that are done in the network and also
5 in the direct care system and including lab and
6 radiology. And then we use the enrollment file
7 for the Department of Defense.

8 The -- the results -- and this is up to
9 date as of a week ago, we did this. This is for
10 looking November 2007. This is the current rate
11 using the HEDIS guideline for all active duty.
12 And this is regardless of sexual activity. We
13 took out, because of the interest of the board,
14 that particular exclusion of sexual activity.

15 And we took all women to see where we
16 currently are, which is going to be a little bit
17 different than Dr. Kelley's study where they
18 looked at 2005. This is the snapshot of this
19 particular moment in time. And these are the --
20 these are the rates for the Air Force, Army, Navy
21 and then all the branches combined. And we're
22 currently at 71.8 percent.

1 Now, this has been a rumor for a little
2 while that we were going to do this. And as I've
3 seen in the past, what usually happens is the
4 rumor starts, people start practicing because they
5 know accountability is about to come.

6 Another thing that will be of note and
7 Dr. Kelley unfortunately had to deal with this was
8 the gaps in the lab data. The other beauty of
9 starting to do this on a regular basis and putting
10 this out for everybody to see and I imagine soon
11 to be publicly, is that the data quality is the
12 number one part that's improved in the first year
13 of practice.

14 There will be a very steep improvement
15 in the data quality. And as we saw with the Great
16 Lakes, it was really just a classification of
17 where the lab results were and they have now since
18 fixed that. And so, the Navy was looking much
19 better as you can see.

20 The percent of women -- if you look at
21 all DOD beneficiaries, I think we do very well
22 definitely considering our civilian benchmarks

1 that we use from the National Committee of Quality
2 Assurance. For all sexually active women, it's
3 77.4 percent in active duty and all beneficiaries.
4 And this is specifically looking at just the
5 sexually active component with that in there.

6 Now, one of the things we're looking at
7 is how to make sure that we get this into the
8 system, so thinking about the process. We really
9 would like the screening to occur, not as a
10 separate event from the women's health exam but to
11 be included with the pap smear.

12 And so, we were looking at some
13 congruents between whether a pap smear and a
14 chlamydia screen were done at the same time. And
15 in fact, we found that 90 percent of the time,
16 that the pap smear and the chlamydia test were
17 done together. And for the -- all beneficiaries,
18 it was 83.7 percent.

19 So, that means our margin of improvement
20 in process is not going to be very high. It's
21 about 10 to 15 percent that we haven't processed.
22 The rest of the delta will have to come from

1 people who, for one reason or another, haven't
2 been screened at all.

3 So, that's the essence of what we're
4 looking at. And we will begin doing this -- the
5 Army and the Navy will have their way of
6 presenting this to their particular services. We
7 usually present this in a once a month meeting to
8 the general officers from which it will
9 disseminate down to all the managed coms and the
10 military treatment facilities.

11 A few limitations to take into account
12 with this, number one, the methodology will
13 identify women who are not sexually active. There
14 are women who are on oral contraceptives and that
15 have pap smears who are not sexually active.

16 Pregnancy tests, many times, are done by
17 protocol. You go to the emergency room with
18 abdominal pain, you're going to get a pregnancy
19 test regardless of sexual activity as being one
20 example, preoperative studies and things like
21 that.

22 And the other is that methodology may

1 not capture all screening. As you know, some
2 people will go to other sources for their women's
3 healthcare other than where they're enrolled at
4 and have ample opportunity, especially with the
5 college aged group that we're dealing with to do
6 that, for example, planned parenthood, college
7 clinics, or other non-network facilities.

8 If they bill it, we collect it generally
9 speaking in terms of the data. But if they do not
10 bill us and it remains anonymous or as self pay or
11 done as another part, we won't have any record of
12 that particular activity.

13 Are there any questions?

14 DR. POLAND: Mr. Parkinson?

15 DR. PARKINSON: Just to clarify. Great
16 presentation again. This does include purchase
17 care data?

18 LT COL BONNEMA: It does, uh-huh.

19 DR. PARKINSON: It does, okay. Well,
20 let me just say as someone who has spent a lot of
21 time with employers and quality and data and
22 relative to the VA, the DOD has not been very

1 public in publishing quality information. And I
2 would encourage you to, you know, assume it's
3 sound or the methodology is good to get this into
4 the public forum.

5 I mean, what it essentially shows is
6 that we are double even a 90 percentile plan. So,
7 the leading top five percent or two percent of
8 plans in the country, DOD exceeds in terms of
9 meeting the standard metric for chlamydia
10 screening, now everything else equal in terms of
11 how we treat it and sexual partners aside, but
12 your general comments about defining the metric
13 using a nationalized standard, publishing the
14 information for inner service, inner MTF quality
15 improvement is a great model. And it's the reason
16 that the whole program was set up in the mid-
17 nineties and we never quite followed through, I
18 don't think.

19 So, maybe this is a great entrée into
20 doing that, so again, good job, get it out, use it
21 for quality improvement across the system, and you
22 know, we can talk about the margins, but I mean,

1 the 90 percentile plans are performing -- if you
2 really saw that line, they're performing at 45
3 percent. DOD is performing at best I can tell at
4 85 to 86 percent around a nationally accepted
5 standard for chlamydia screening.

6 So, again, well done.

7 LT COL BONNEMA: I think that the
8 advantage that we have over many of the plans is
9 that we -- our office collects the clinical
10 chemistries by name, by date, by person, by lab
11 result. And I think that gives us a significant
12 advantage in terms of data collection compared to
13 if you were doing it purely on administrative
14 data.

15 DR. POLAND: Colonel Gibson?

16 COL GIBSON: A couple points. First of
17 all, Dr. Parkinson, totally agree with what you
18 said. It goes back to why we have HEDIS, et
19 cetera, if we measure it, there's accountability.

20 Correct me where I'm wrong on my
21 statement here. What we mean by metrics is
22 through the system with population host support,

1 we can drill down to the hospital, to the
2 provider, and monitor these issues. So, if
3 Colonel Bonnema had Brooks Air Force Base's rates
4 of chlamydia screening for this population is
5 outside of the norm, the hospital commander is
6 going to know that, the magcom is going to know
7 that, et cetera. So, there is an accountability.

8 I totally agree with what Al said. This
9 rumor that we're going to do this has been going
10 on for what, 18 months, 14 months? It has already
11 made a difference. Think back to what I just told
12 you a little while ago. The last real chart audit
13 of this showed 30 percent. This is remarkable.

14 And part of this whole issue of if we do
15 -- if we do a really good job of reproductive
16 health in our annual program, we can then measure
17 the attributable benefit from recruit screening.

18 DR. LOCKEY: Just one question. Of the
19 percent of women that are in the Armed Forces,
20 what percentage is it that this under 25 -- 25 or
21 under age group represent?

22 LT COL BONNEMA: I don't know that

1 number. I don't know what percentage that 16 to
2 25 is. It is -- none of them are 16, but it's
3 hard to know right off hand. Yeah, we have some
4 17 year old accessions, but.

5 DR. POLAND: Dr. Walker?

6 DR. WALKER: If I could comment that
7 with the movement of these people from base to
8 base, I'm not convinced that they're all being
9 treating if they get a positive test coming back.

10 DR. POLAND: Brief comment.

11 MS. HITCHCOCK: Yeah. Thank you. First
12 of all, let me commend the DOD for really setting
13 the standard and getting the country off its duff
14 with this problem. Compared to the public sector,
15 you're quite a ways ahead.

16 I think the question is the national
17 standards, are they appropriate? Is it process
18 versus results? And how are we going to tackle
19 this?

20 There's a very disturbing but
21 enlightening study that was done in reproductive
22 physiology several decades ago. A number of women

1 both never pregnant and pregnant at least once
2 volunteered for a study. They used latex
3 particles with a little radio tag on each one.
4 They put the women in stirrups on the table and
5 took a syringe and gently lavaged her cervix
6 putting these particles that are (inaudible).
7 They waited two hours, they wheeled her into the
8 X-ray room, and they took pictures. Within two
9 hours, every single one of those women had
10 radiotonic particles in up in her fallopian tubes.
11 Okay. So, the point is that good pathogens take
12 advantage of Mother Nature's selective forces.
13 Sperm are supposed to get up there and get up
14 there quickly, and so therefore, these organisms
15 get up there quickly.

16 So, I think the risk of getting upper
17 tract infection with initial infection is high. I
18 think if you look at the data, 14 year old boys
19 are sexually active, 15 year old girls are
20 sexually active, and by the time they're 19, 85
21 percent of them have had 3 to 5 partners. I would
22 say that you have a 30 to 50 percent chance of

1 everybody that enters the service already being
2 infected.

3 So, is the program good enough to beat
4 this pathogen at its own game? And do you have to
5 look at something much more intensive than what
6 you already have? Now, I don't know whether it's
7 worth it in terms of cost benefit, but if you're
8 results are not where they need to be, the
9 question is are you wasting your money.

10 And this -- I'll close with an example.
11 Let's supposed we lived in Bangladesh where every
12 summer, summer diarrhea, which is the surrogate
13 for cholera, occurs. What would you recommend?
14 Wash your hands once a day, once a week, once a
15 month, every six months to reduce your risk.
16 Well, I would say you'd figure out what the
17 likelihood is of infection every time you went
18 into a situation where you're likely to have feces
19 on your hands, somebody else's. And you'd fashion
20 your prevention message around that.

21 And I think that work has not been done
22 and I think it's not available to you. I think

1 you have an opportunity to do it if you can start
2 with a screening program that actually puts you
3 back to baseline with chlamydial infection in
4 these men and women. Thank you.

5 DR. POLAND: I have a couple of comments
6 on that. I'm frustrated with this. We have made
7 recommendations for going on 10 years for a health
8 problem that's measurable, for which there are
9 validated things that we can do, it's treatable,
10 treatment is cost-effective.

11 And we can't continue to say people are
12 our most important asset and then let loose with
13 something as relatively simple as this in a
14 population where we have the wherewithal to do it.
15 And some metrics, as Mike has pointed out, we do
16 well. And others, as you've heard this morning,
17 we don't do well.

18 I haven't heard about a male screening
19 program, though we directed that one be developed
20 three years ago. I haven't heard about movement
21 toward a universal at basic -- at accession
22 screening program, though we've asked that that be

1 done for years now.

2 This, to me, is a leadership issue.
3 Someone doesn't think this is important enough to
4 do. There's no getting around this. This is
5 clear to me, unless I am seeing it in some biased
6 or unclear way. This is an important thing to do.
7 It's the right thing to do.

8 There -- we can argue and nitpick and
9 some of the methods, but the data here are
10 reasonably clear. We don't do what we said in our
11 own policies we should do, and this needs to be
12 fixed. I'm not sure what else to do in this
13 regard.

14 We have written memos to the ASD for
15 Health Affairs, who in turn, have leaned on some
16 of the services. Evidently, we have to do
17 something more. We've made incremental progress,
18 but I'm not happy where we are even after 10 years
19 of dealing with this.

20 So, I will confer in executive session
21 with our board members, but this needs to be taken
22 care of, enough with this. We need to do this

1 right, and we need to do it in a high fidelity
2 manner.

3 With that, I'll stop the discussion
4 unless there are any other comments, and we'll
5 move on.

6 CDR SCHWARTZ: Just to add some
7 diversity of opinion on this, in the Canadian
8 Forces, we would not made testing -- chlamydia
9 testing on enrollment accession an obligatory act.
10 We would recommend and guide and say this is good.
11 And we probably wouldn't have the compliance
12 numbers that you have. And again, I'm -- Canada
13 is a fair bit behind in having data to look at on
14 our rates of -- on our prevalence.

15 So, I just put that subtle point of
16 difference of how we influence behavior for a life
17 and maybe we influence a better result on personal
18 choice by the woman or the man by essentially
19 insisting that this is a right and good act as is
20 done, and maybe that shapes better choices later
21 on in life.

22 But I just think that there's some

1 element of the personal choice element --

2 DR. POLAND: Sure.

3 CDR SCHWARTZ: -- that I'd bring to the
4 table.

5 DR. POLAND: And in part this relates to
6 our request three years ago, that an education
7 program be developed, disseminated, and deployed.

8 Okay. We're going to move on to a
9 question on vaccine use in military recruits.
10 Captain Neil Nato will provide this.

11 MR. NATO: I'd like to thank the board
12 for taking on this question. And it'll be a brief
13 presentation, so it'll get us back on track here.

14 The question is actually broken up in
15 two parts. And the genesis of the question came
16 from our recently inaugural public -- Navy Public
17 Health Advisory Board, which received this
18 question from our recruit training centers.

19 And the first one in regards to
20 immunizations is like some recommendations from
21 the board whether recruits who are younger than 18
22 years old develop less immunity when receiving a

1 mixed series of pediatric and adult doses of a
2 particular vaccine, as opposed to having only the
3 adult dose.

4 So, as the board is aware of the cutoff
5 on a lot of the vaccines is 18 years old, and a
6 fair number of our recruits are under 18 years of
7 age and so they receive a pediatric dose and then
8 especially on the series of hepatitis vaccines
9 that I'll discuss in a little bit more detail,
10 then they get -- go on and get the adult dose.
11 So, the concern is whether that's appropriate.

12 The second question is in regards to
13 influenza vaccination and if it were made
14 available during the summer period, should we be
15 doing it in our recruit training centers.

16 So, in regards to question number one,
17 hepatitis vaccination is the one that has the most
18 interest, in regards that there is a nice
19 combination product, Twinrix for 18 years of age
20 and over, but there's not a similar dosing
21 schedule for under 18. So, consequently then you
22 have to use the single does vaccinations of Havrix

1 or I think -- believe it's Energix for hepatitis
2 B.

3 And so, as you can see from this slide,
4 the dosages are about half when using the
5 pediatric dosing schedule versus the adult dosing
6 schedule.

7 In regards to question number two in
8 regards to the flu vaccination question, we do see
9 some influenza activity during the summer, albeit
10 it's not huge. And this data comes from the
11 Februar Respiratory Illness Surveillance Network
12 that NHRC maintains.

13 So, in July -- in August of 2007 of this
14 year, there were several cases of influenza A H3
15 occurred in the basic training population of Fort
16 Benning, and MCRD was approximately a dozen cases.
17 And then there was some influenza noted out among
18 the fleet also during the summertime. But again,
19 the numbers aren't huge.

20 So, the -- so again, the question in
21 regards to both of these is are we -- our
22 vaccination programs in our recruit training

1 centers, can they be further optimized by again
2 looking at trying to go to adult dosing for our 17
3 year old recruits?

4 And also, in regards to the influenza,
5 actually there is a product available in limited
6 quantities with an expiration date through August
7 of 2008 called Flulivol. However, it does suffer
8 the same limitations in regards that it's only for
9 the 18 year old and above population.

10 I did contact the manufacturers and
11 there is European data on these issues in regards
12 to the under 18 population, that in Europe there
13 were trials involving 17 year olds receiving adult
14 doses. And it looks like, you know, in regards to
15 the side -- you know, concern about any side
16 effects, nothing out of the ordinary.

17 Questions?

18 DR. POLAND: Neil, this is Greg Poland.
19 Is your concern with the -- with question number
20 two one of decrement of protective antibody
21 levels?

22 MR. NATO: In regards to the flu?

1 DR. POLAND: You're talking about
2 northern hemisphere vaccine; right?

3 MR. NATO: Right, correct.

4 DR. POLAND: And if it were to be
5 available, you're asking, could it be given.

6 MR. NATO: Or should it be given to our
7 recruits because, again, I don't -- didn't have
8 the time to collect any data, but again, from our
9 -- the recruit population, probably the vast
10 majority of them did not receive the flu vaccine
11 during the previous year.

12 So, again, would there be an advantage
13 to go ahead and give them the flu vaccine? These
14 would be the summertime accessions.

15 DR. POLAND: Ah. So, you're referring,
16 for example, this summer --

17 MR. NATO: Right.

18 DR. POLAND: -- giving people this
19 season's vaccine?

20 MR. NATO: This season's, right.

21 DR. POLAND: Mike?

22 DR. OXMAN: I'd like -- I'd like to

1 address these. I talked with Neil yesterday a
2 little bit, so I've thought about it, the question
3 of whether to use the standard adult dose of
4 hepatitis A and B vaccine in 17 year olds that
5 you're using in 18 year olds.

6 From a scientific point of view, a 17
7 year old has an equivalent adult immune system and
8 has a body habitus that is much closer to that of
9 an 18 year old than of a nine or a ten year old.
10 So, I think there is every scientific reason to
11 use the Twinrix, the ordinary vaccine in the 17
12 year old in the military, and it's only an issue
13 of licensure or what have you.

14 DR. POLAND: Yes.

15 DR. OXMAN: And I think that it
16 certainly -- there is no rationale for using a
17 pediatric dose of the vaccine in a 17 year old
18 that I can see. So, I think the answer to the
19 hepatitis one from a scientific point of view is
20 very straightforward and is --

21 DR. POLAND: I would agree. And often,
22 these time -- these age limits are a function of

1 the company not studying adequate numbers in that
2 age group to be able to alter their BLA.

3 DR. OXMAN: And it's informed consent.
4 I mean, there are practical reasons why they start
5 at 18.

6 DR. POLAND: Yeah. So -- right. So, I
7 mean, the real issue is there's no scientific
8 reason not to use the adult dose, but are you
9 stuck in this issue of not being able to --

10 MR. NATO: Right, the off label
11 considerations.

12 DR. POLAND: Yeah. But with a board
13 recommendation, could you do that?

14 COL GIBSON: Let me add -- this is
15 Colonel Gibson. Let me add to that. We're really
16 not asking y'all to engage in our issue with FDA
17 as far as trying to get an exemption here.

18 We really want to stick to this question
19 with respect to the biological issues, scientific
20 issues, two parts, giving adult dose to 17 year
21 olds. And the other is starting with a pediatric
22 dose and then ending with an adult dose for these

1 individuals, what's the science -- what are the
2 biologic implications of doing that?

3 We'll take our discussion to FDA anyway.
4 Would your opinion help, maybe, but probably not.
5 The issue is we just have to -- we really would
6 like some expert opinion on the biology of this
7 issue.

8 DR. POLAND: Well, from a biologic point
9 of view, I know of no data that would lead to an
10 adverse immunologic or side effect profile. In
11 fact, the immunogenicity is such that you would
12 have enhanced immune responses, at least in these
13 cases of these vaccines.

14 Pierce and then Joel.

15 DR. GARDNER: I totally agree. I think
16 all of us would say it's better to give the adult
17 formulation, but I think you're trumped by the
18 idea -- unless you do it on label, you're not
19 going get there.

20 Now, the only thing that would be on
21 label, actually, you can give the influenza year
22 round, and that's been recommended. So, the

1 answer to that one is clear. You can go ahead and
2 -- there's not a different formulation for 17 and
3 for 18 year olds; is there?

4 DR. POLAND: No, not for flu.

5 DR. GARDNER: It's just the question of
6 timing. So, the answer to that is yes. But as
7 you said, the rest is the company didn't submit
8 the right data, and biologically we would all say
9 it's fine, but -- and hepatitis A, we over
10 immunize already. We give two shots when you
11 really only need one. So, let's leave it there.

12 DR. POLAND: Okay. Dr. Silva?

13 DR. SILVA: Ditto. I was going to make
14 the same comments. Now, you could turn the coin
15 around and say maybe this lower dose is doing a
16 disjustice to someone physiologically whose -- as
17 Mike has described.

18 DR. POLAND: Mike?

19 DR. PARKINSON: Yeah, Neil, just a
20 clarification on question two. Are you saying
21 that your summer accessions you would give what
22 would essentially be a soon lapsed formulation of

1 that previous season's flu vaccination?

2 MR. NATO: Current season.

3 DR. PARKINSON: Right. But I mean, so
4 -- but what happens -- I mean, those accessions
5 who then go to their first duty station, they
6 would have access to the usual influenza program,
7 which is mandatory across DOD anyway; right?

8 MR. NATO: Yes.

9 DR. PARKINSON: So, why wouldn't you
10 just wait for them to do that?

11 MR. NATO: Well again, to cover that
12 period during, you know, the basic training camp
13 for flu activity, albeit it's small. And so,
14 that's kind of the question is should we continue
15 it year round --

16 DR. PARKINSON: Yeah.

17 MR. NATO: -- realizing that again,
18 they'll probably end up with two vaccinations in
19 --

20 DR. PARKINSON: Yeah, right.

21 MR. NATO: But, and then talking with
22 Dr. Oxman, he had some perspective on that.

1 DR. POLAND: That actually may be a
2 little bit of an issue because in some studies
3 where one or more of the components don't change
4 from one season's vaccine to another, and those
5 injections are given close together, you can have
6 a -- almost a serum sickness like picture occur or
7 at least large local reactions. It tends to be
8 more common with polysaccharide vaccines than a
9 protein-based vaccine, but it can happen.

10 So, if you gave, you know, let's say A.
11 Sydney, which was in the vaccine for three years
12 running or so, if you happened to give a dose in
13 August and then you gave another dose when the new
14 vaccine, which also had A. Sydney became available
15 in September or October, you could well see
16 enhanced local side effects and perhaps some
17 spillover into self resolving systemic side
18 effects. You have to take that into account.

19 Mike?

20 DR. OXMAN: I would doubt that with the
21 influenza vaccine. And the other advantage in
22 doing it is the next year's vaccine -- some of the

1 elements will have drifted and so, you have an
2 element of anamnestic response, which is an
3 advantage in terms of efficacy.

4 So, I -- I certainly would have no
5 problem doing that. And it also means that you
6 have a standard routine of immunizing at
7 accession, which I think is a good idea.

8 DR. GARDNER: Greg, I thought the CDC
9 has been fairly clear that out of season
10 immunization is a recommendation if you didn't --
11 you can immunize throughout the year. Certainly
12 there are enough extraneous cases that happen that
13 probably justify it.

14 And I hadn't been -- I was always under
15 the impression, unless you have data otherwise,
16 that the toxicity issues were fairly minimal.

17 DR. POLAND: I think as long as you
18 probably separate them by a month or so. And the
19 data I'm referring to was a study done in elderly
20 people where they were trying to boost immunity by
21 giving two does. And this is where they saw the
22 enhanced local side effects.

1 And I'm reasoning that with an even more
2 vigorous immune response, you might see more of
3 that in young people. But I suspect --

4 DR. GARDNER: Well, that's an issue --
5 if that's truly an important issue, then we'd have
6 to modify. But otherwise, I'd go ahead and give
7 it.

8 DR. POLAND: The farther you separate
9 them, the less likely that would be.

10 Yes?

11 MS. BETZEL: Yes, Tanis Betzel from
12 BUMED. I see two separate issues here with our
13 recruit population and our fleet going to the
14 southern Pacific. I wonder if we should be
15 looking at acquiring the southern hemisphere
16 formulation for the second group.

17 DR. POLAND: The board did consider that
18 an issue to recommendation at our last meeting
19 actually, which was to not at this point.

20 MS. BETZEL: Not do it, thank you.

21 DR. POLAND: Colonel Hatchet?

22 COL HATCHET: As far as -- you said that

1 pediatric vaccine -- we have been in some
2 discussions with the FDA, and their position is
3 DOD would not be in a position of asking for an
4 exemption. It would be through the manufacturer.

5 DR. POLAND: Manufacturer.

6 COL HATCHET: And Health Affairs in
7 coordination with Milbax, actually more Milbax,
8 which is kind of pushing it along, they're
9 discussing that option with the manufacturers.
10 However, the reality is that unless they have the
11 data already packaged --

12 DR. POLAND: No.

13 COL HATCHET: -- it's not a big
14 financial incentive for them to do that seeing
15 that they also make vaccines that could be easily
16 complied with and provide the same level of
17 protection.

18 So, chances are if we want to do this,
19 it will represent off label use.

20 DR. POLAND: It will be a moot issue,
21 yeah. Jim?

22 DR. LOCKEY: This question is for you,

1 Greg. Could you go to the question one, the
2 second slide? Would you look at this? I'm not
3 sure I'm clear as to what you recommended.
4 Because the Twinrix, if I read this right, the
5 hepatitis A dose is a pediatric dose?

6 DR. POLAND: Is what?

7 DR. LOCKEY: Is a pediatric dose. When
8 you said you're recommending this for 17 year
9 olds, would you -- the pediatric dose for
10 hepatitis A is okay?

11 DR. POLAND: Well, I think the question
12 that they're asking is could they give an adult
13 dose to a 17 year old.

14 DR. LOCKEY: Okay. So, when you look at
15 this slide, what would you be recommending? It
16 just wasn't clear to me what you --

17 DR. POLAND: So, I would not have any
18 problem with them using an adult dose. It's a
19 higher dose.

20 MR. NATO: Right. That was for the
21 hepatitis B, so again, we want to -- the question
22 that came up is, you know, why do we have to --

1 from our recruit centers was why do we have to
2 give the 17 year olds the separate dosing of
3 Havrix and then Energix for hep B? Why can't we
4 just keep using Twinrix? But you're right.

5 DR. LOCKEY: But Twinrix has a pediatric
6 dose for hepatitis A. That was my question.

7 DR. POLAND: Right. You could -- one
8 could do that, and they're stuck in doing that
9 with the few people who are not yet 18.

10 DR. LOCKEY: So, would you recommend not
11 using that then, because it has a pediatric --
12 that's what I'm -- it's not clear to me.

13 DR. POLAND: So, you're asking me to say
14 in public what they always tell us not to do.
15 From a point of view of a vaccinologist, I would
16 not have any problem giving an adult dose to a 17
17 year old.

18 DR. LOCKEY: Adult dose, okay. That's
19 what I'm saying.

20 COL GIBSON: And that was our -- the
21 real basis of the question is the biology, not --
22 whether -- we're not asking you to endorse off

1 label use of a vaccine.

2 DR. POLAND: But scientifically --

3 COL GIBSON: We just wanted to have this
4 group give us some insight into the biology
5 underneath this issue and your opinion.

6 DR. POLAND: Okay.

7 COL GIBSON: Clear it for the record.

8 We're not asking you to endorse off label use.

9 DR. POLAND: Okay. Because it's related
10 to influenza, I'm going to move ahead here to --
11 is Commander Luke here? Yeah, Tom, you're still
12 here, who is going to discuss DOD convalescent
13 plasma treatment guideline development.

14 I want to commend Commander Luke for
15 raising this issue. He had a very insightful, I
16 thought, thought that he then went and looked into
17 the literature and published a paper. I'm not
18 sure if you have it in your books, but it has
19 previously been circulated to the board. And it
20 has -- I guess it is under tab 11.

21 And it has engendered a number of
22 sideline discussions regarding the use of

1 convalescent serum particularly in areas where we
2 may not have a vaccine or may not have any other
3 acute therapy that could be lifesaving. So, I do
4 want the board to hear this brief presentation and
5 it's something that the Infectious Disease
6 Subcommittee will have further discussion on.

7 So, Commander Luke?

8 CDR LUKE: So, they're setting this up,
9 so I've had the opportunity to talk to board
10 members and I'm hoping you've had the opportunity
11 to see some of the articles and so forth that were
12 forwarded through Colonel Gibson and Dr. Poland.

13 The -- as you know, your last set of
14 recommendations to the ASDHA, the board
15 recommended that the DOD formulate guidelines,
16 H5N1 and other virulent pathogens should this
17 therapy be needed.

18 The real question we're asking today is
19 how do we get there. Now, Dr. Cassell has
20 endorsed those, but there's a mechanism that needs
21 to be considered about how we will proceed.

22 So today, I'd like to talk about

1 convalescent plasma therapy. Briefly, we'll talk
2 about the background, some of the implications of
3 -- with H51 and other pathogens and highlight some
4 recent publications not only by myself and
5 colleagues but Dr. Zhou in China and then also
6 talk about Argentine hemorrhagic fever, which is
7 the best known and best studied use for
8 convalescent plasma, briefly about the need for
9 guidelines, and the way ahead, and a potential
10 role for this body.

11 For background, there's a long history
12 of convalescent plasma in serum. It's been used
13 in the prophylaxis and treatment of multiple
14 pathogens not only in humans, but also in animal
15 models.

16 There have been two cases of
17 convalescent plasma for H5N1 victims. One was a
18 57-year-old Chinese female with chronic
19 obstructive pulmonary disease. She survived. And
20 there's also been, by Dr. Zhou, a more recent
21 letter that he sent to The New England Journal of
22 Medicine.

1 And we've had an opportunity to talk to
2 some of his colleagues and so forth. And
3 something very interesting occurred there, and
4 we'll review that.

5 Colleagues and I did a meta analysis on
6 some studies that were published in 1918 and 1919,
7 where this was actually fairly well, you know, by
8 the standards of the day, studied but also used
9 internationally, not only within the United
10 States, primarily the United States Navy and with
11 some studies in the U.S. Military, but also in
12 Sweden, in England, in Romania, and other
13 locations.

14 And I think that at their corollary for
15 other virulent strains of influenza, there may be
16 something that can be brought forward from that
17 study. Certainly used with SARS very extensively
18 during that outbreak. A recent meta analysis of
19 that was -- could not find -- was an inconclusive
20 result, but that was mostly because there was no
21 standardization of therapy. There was no
22 guideline.

1 So, what -- many of the reports that
2 came out were not comparable. But, if you
3 actually take a look at those studies, it's pretty
4 convincing evidence that convalescent plasma was
5 therapeutic and helpful in patients with SARS.

6 Measles, through the 1920s and 1930s,
7 this was the standard of care, very effective.
8 And that's also been replicated. As we know, the
9 maternal antibodies protect infants and also
10 protect you against vaccinations, one of the
11 reasons why we have to have multiple measles
12 vaccines. It's very effective.

13 Hepatitis A, again, in the 1920s and 30s
14 and of course, with South American hemorrhagic
15 fevers, the Arenaviruses, which is a category -- a
16 CDC category bio- warfare pathogen, this is the
17 standard of care. And we'll talk about that.

18 Obviously known for diphtheria, for
19 orthopox, and it was used -- convalescent plasma
20 and serum was used fairly extensively in India as
21 a prophylactic and treatment regiment, but also is
22 used VIG for adverse reactions for vaccinia and

1 many others, including anthrax and other diseases
2 which the DOD has particular concern.

3 The fact here is, in my opinion, that
4 this will be used in desperate situations, like
5 clinicians during outbreaks and epidemics and
6 pandemics. So, I think that to avoid some of the
7 problems that we've had with all of this,
8 particularly with our recent history with SARS,
9 that a well developed guideline and reporting
10 mechanism would go a long way to resolving
11 questions of efficacy and suitability within the
12 DOD and perhaps in other organizations.

13 I think it is true that DOD personnel
14 are at high risk for epidemics of infectious
15 disease, not only from natural causes but also
16 from the result of purposeful bio- terrorism.

17 Another fact that I think is very
18 important is that the DOD can collect, produce,
19 and transfuse large volumes of convalescent plasma
20 from military volunteers who have either recovered
21 from a disease or have been vaccinated.

22 And one aspect of DOD, of course with

1 our small pox and anthrax vaccine policies is that
2 we essentially have the highest population of
3 individuals that have received those very
4 specialized vaccines, and we may be the only
5 source of convalescent plasma, not only for
6 ourselves but also for our civilian population.

7 The convalescent plasma or an IBIG
8 product can be used within the Department of
9 Defense and in the civilian population. So, I
10 think that those have ramifications, not only
11 within the Department of Defense but also in other
12 areas that may be having a natural epidemic or be
13 subject to bio-terrorism.

14 And it is my opinion and an expert
15 opinion guideline and data collection format can
16 reduce morbidity and mortality in the DOD by
17 standardizing the therapeutic approach and
18 collection of clinical data and outcomes so that
19 very firm -- determinations of efficacy can be
20 made.

21 Briefly, we'd like to talk about plasma.
22 It's routinely required and transfused for the

1 treatment of very serious diseases, such as
2 coagulopathies. And this is typical done by JACO
3 standards and others and the American Association
4 of Blood Banks after patient consent.

5 So, even if you were getting a routine
6 plasma transfusion, what we would consider to be
7 routine, patient consent is typically obtained.

8 Plasmapheresis donors can safely donate
9 1,000 to 1200 milliliters of plasma per week.
10 This is a very significant amount, particularly if
11 you take a look at the older data and the more
12 recent data about how much is necessary where you
13 have an efficacious indication for convalescent
14 plasma, that a single individual could probably
15 supply enough plasma to treat multiple patients.

16 Convalescent plasma collected at the
17 local level; that is, at the MTF, could have an
18 immediate impact during the next pandemic
19 influenza or other disease for which no good
20 treatment exists.

21 That means that we're not reliant
22 totally on supply lines from distant stock piles

1 or manufacturers is that clinicians have something
2 to offer patients in the event that something very
3 terrible occurs. And certainly that is something
4 that we are looking at with H5N1 and pandemic
5 influenza preparations.

6 The last point I'd like to make is that
7 donor motivation during emergencies is rather high
8 either from mass casualty events within the
9 Department of Defense or after, you know, a major
10 national tragedy, such as 9/11. I will say that
11 following 9/11, within hours, hundreds of people
12 were lining up at the National Naval Medical
13 Center to donate blood.

14 I think that that kind of motivation
15 will be necessary. And I think that we can expect
16 that kind of motivation during an emergency where
17 we're calling upon military members and others to
18 donate their plasma to save or help their fellow
19 man.

20 This is what we're looking at here.
21 This is probably the best single graph that I've
22 seen that explains exactly what we're talking

1 about in the situation of a pandemic of virulent
2 influenza.

3 This is the Surgeon General's report to
4 the Secretary of War for 1918. It shows that it
5 has a baseline rate of essentially infectious
6 disease mortality on an annualized rate of 5 to 10
7 per 1,000 per week, which would now be considered
8 a true emergency. It goes up to about 100 per
9 1,000 per week. And we need to have as many
10 solutions to this problem as we can.

11 I think that it is likely in the future
12 of influenza epidemics that we could certainly,
13 you know, see similar type of situations. And the
14 ability to rapidly institute convalescent plasma
15 could be lifesaving for many, many individuals.

16 So data, again, I hope you've had a
17 chance to see this. For the Spanish influenza,
18 this was a meta analysis that we produced in the
19 annual list of internal medicine. It certainly is
20 not the last word on this, but certainly we think
21 that it was an interesting study.

22 And then of most concern, and you'll see

1 some data from this, Dr. Zhou with treatment of
2 convalescent plasma that he published in The New
3 England Journal of Medicine.

4 In the case of the most widely studied
5 and most -- and most -- considered to be the best
6 use of convalescent plasma is Argentine
7 hemorrhagic fever. And there's two examples here,
8 Dr. Ruggerio and Dr. Matzaggui. And I provided
9 those so that you can see those after the
10 presentation has ended and you're back at home.

11 So, in the study that we did, there were
12 27 reports that were found; 8 relevant studies
13 involving 1,703 patients met our rather extensive
14 inclusion criteria. Treated patients were often
15 selected because of more severe illness. This was
16 a selection bias in which a convalescent plasma
17 was given a pretty rigorous trial.

18 The most common laboratory finding was
19 leukopenia. The most common clinical finding was
20 cyanosis and dyspnea. Convalescent whole blood,
21 plasma or serum is obtained from donors one to six
22 weeks after recovery from influenza. Patients

1 typically receive one or two treatments. And the
2 average amount of plasma in the treatment product
3 was about 100 to 150 milliliters or 2 milliliters
4 per kilogram.

5 All 8 studies reported a survival
6 benefit. You've seen this in the article that was
7 presented to you, but essentially for all comers,
8 that is no differentiation about when the plasma
9 was applied, the overall crude case fatality rate
10 was 16 percent in those that were treated versus
11 37 percent among controls. The range of absolute
12 risk difference is in depth with 8 to 26 with a
13 pooled risk differential of 21 percent between the
14 groups.

15 If this was stratified by early and late
16 therapy, the overall crude case fatality rate was
17 19 percent for patients treated within 4 days of
18 pneumonia complications and 59 percent of patients
19 treated 4 days or later. The range of absolute
20 risk difference in death was 26 to 50 percent with
21 a pooled risk difference of 41 percent.

22 This is the recent graph that Dr. Zhou

1 presented in his article in The New England
2 Journal of Medicine. And I think we can see that
3 something rather amazing occurred here. A
4 31-year-old male presented to a Chinese hospital
5 with a 4-day history of influenza like influenza.

6 He was in the hospital for four days, as
7 you see with the green line with the triangles
8 above. He was diagnosed with oceltamivir by RTPCR
9 and immediately started upon oceltamivir 150
10 milligrams BID, which is twice the recommended
11 dose.

12 This individual had a series of RTPCRs
13 to determine viral copies per milliliter and
14 continued from the 13th to the 14th. And on the
15 15th of June, he received 200 milliliters of 1
16 and 80 neutralizing antibody titer plasma. And
17 within 24 hours, the number of viral particles per
18 milliliter went from 180,000 per milliliter to
19 essentially zero. And there is a more detailed
20 clinical report provided in that article.

21 This indicates that this works for H5N1.
22 I mean, we can argue that maybe oceltamivir had a

1 role, but clearly, there seems to be something
2 going on. I will mention that there have been a
3 series of animal studies with the use of
4 convalescent serum in mice, which essentially
5 replicate not only the findings that my colleagues
6 and I found with Spanish influenza but also with
7 the results that Dr. Zhou has reported for the two
8 patients in China.

9 For plasma therapy for Argentine
10 hemorrhagic fever, which I mentioned is a CDC
11 bio-terrorism category A pathogen, the use of
12 convalescent plasma within 8 days of becoming
13 symptomatic is associated with a 90 percent
14 reduction in mortality. It is the standard of
15 care.

16 And this is something that I think that
17 we need to be concerned with and something that if
18 we have a situation where an individual is using
19 this or another agent multiple times, it is likely
20 that we're going to have survivors and that we can
21 use that plasma without doing IVIG to go to fact
22 if we're prepared and ready to institute that

1 policy.

2 There are some key issues and questions.
3 I think that I would like the board to consider
4 the implications of convalescent plasma therapy to
5 the Department of Defense, not only from a
6 national security situation but also the
7 advisability and need for multiple agency
8 involvement, you know, should the board decide to
9 proceed in this manner.

10 My concept is I would like the board to
11 bring together experts and other entities to
12 create consensus, that is expert opinion
13 convalescent plasma therapy guidelines to treat
14 H5N1 or other novel pathogens for which effective
15 and plentiful therapeutics do not or may not
16 exist.

17 Certainly there are some technical,
18 logistical, and clinical issues that need to be
19 addressed, not necessarily resolved with those
20 guidelines, but they should, you know, try to
21 incorporate those specific issues.

22 And the real question is the DHB role.

1 As I've said, you have previously endorsed the
2 need for guidelines and that recommendation was
3 accepted by Dr. Cassell's ASDHA. And the question
4 for the board is what is our next step. Thank
5 you.

6 DR. POLAND: Thank you, Commander Luke.
7 Questions or comments?

8 (No response)

9 DR. POLAND: I can say that I think the
10 board would be very supportive perhaps using a
11 mechanism of temporary task force or something,
12 attach the Infectious Disease Control Subcommittee
13 would be a nice way to keep moving this thing
14 forward.

15 CDR LUKE: Yes, sir. Some of the -- we
16 have had an opportunity and I won't mention them,
17 but we've had an opportunity to talk to, you know,
18 some of the world leaders and experts as well as
19 some individuals represent, you know, some
20 interagency groups and other entities that are
21 willing to participate, you know, should a modicum
22 of funding, you know, be provided to, you know,

1 bring them. They would be happy. They recognize
2 the need for it, and they would be willing to
3 participate.

4 COL GIBSON: Tom, this is Colonel
5 Gibson. Just for the record and to be clear,
6 we're talking about a group of maybe like 20
7 people or so, right, rather than a consortium of
8 hundreds coming to some sort of a conference on
9 this.

10 CDR LUKE: Sure. So, there aren't a
11 whole lot of convalescent plasma therapy experts,
12 right, so it's a relatively small group of
13 individuals that could help us with this --

14 COL GIBSON: Thank you.

15 DR. POLAND: -- sort of a fluid group.
16 Dr. Walker?

17 DR. WALKER: There is a growing body of
18 evidence for many agents, including agents that
19 people don't pay a lot of attention to that are
20 difficult to treat sometimes that antibodies and
21 of course, viruses, we call them neutralizing
22 antibodies are very effective when they hadn't

1 been thought to be previously.

2 For some of these diseases, the
3 antibodies appear late, very late. Like for
4 example, in lesser fever, neutralizing antibodies
5 don't appear sometimes until a year after the
6 patient has gotten well. And so the issue is that
7 it's not the plasma that's therapeutic; it's the
8 antibodies that's therapeutic.

9 DR. POLAND: Sure.

10 DR. WALKER: And that perhaps using
11 convalescent plasma isn't the best approach, that
12 maybe we should be looking at engineered
13 antibodies or humanized monoclonal antibodies and
14 pick the targets and make the products.

15 DR. POLAND: I think a group like this
16 could explore all those issues.

17 DR. WALKER: Explore that, yeah.

18 DR. POLAND: Pierce, did you have a
19 comment?

20 DR. GARDNER: Yeah. I think this has
21 moved from the far back burner onto a viable
22 significant possibility that we should be

1 supporting. And it clearly is something that
2 Pharma will never take on. And so, the real
3 question is what possible -- this sounds like
4 something that the military should champion. And
5 if we're going to go anyplace, it will probably
6 have to be done somewhere in government.

7 I don't believe NIH does anything at all
8 with immune therapy in terms -- it's all involving
9 vaccines --

10 DR. POLAND: In terms of passive
11 immunization, yeah. I think you're right.

12 DR. GARDNER: I think it's very
13 interesting. Commander Luke deserves credit for
14 keeping our attention on this. And it's something
15 that deserves some increasingly high level of
16 thought with certainly some questions as to who
17 would actually do this because it's not going to
18 be a moneymaker for anybody.

19 COL GIBSON: As Commander Luke pointed
20 out, there is a national implication to this, so
21 it's important that the other agencies be engaged
22 and perhaps consider ownership of the issue as a

1 whole.

2 DR. POLAND: Joe and then Mike.

3 DR. SILVA: Yeah. I liked the
4 presentation, Tom. Thank you. And I think it's
5 time for us to take this one on as a set of what's
6 being reflected. I think can think back briefly
7 again on my days at Wilford Hall circa 1970 when
8 we had a bad group B.

9 We actually had recruits come up, give
10 blood. We gave it to -- I can't remember now, 4
11 to 6 recruits. I don't know if it made any
12 difference. They were on respirators, and we lost
13 about 10 or 12 guys in those days.

14 But the data was reviewed at that time.
15 And we felt impressed with it, that we wanted to
16 try it as a last ditch effort. So, I think some
17 refinement and even looking at where the science
18 is now, as David had hinted at, could start
19 providing a matrix that we could get serious about
20 this problem.

21 DR. POLAND: Dr. Oxman?

22 DR. OXMAN: And actually, we're really

1 talking about at the first level some general
2 guidelines because it's for the unexpected, and
3 we're not going to stockpile something. You know,
4 with leukemic children before we had VZIG, on
5 Friday night, when a leukemic child was exposed to
6 varicella, we'd call the dermatologists around
7 town and try to locate a few volunteers who would
8 give plasma two or three weeks after their zoster.
9 And so, I mean, this is something that has been
10 done --

11 DR. POLAND: Good point.

12 DR. OXMAN: -- you know, in that kind of
13 setting. And I think we should take on -- the
14 Infectious Disease Subcommittee should take this
15 on in terms of getting some additional help and
16 trying to formulate guidelines.

17 DR. POLAND: Good.

18 DR. OXMAN: And I also would like to
19 commend Commander Luke.

20 CDR LUKE: Thank you, sir.

21 DR. POLAND: Dr. Parkinson?

22 DR. PARKINSON: I just can't help but

1 reflect and I don't know the answers to this, but
2 as you fly home today, you think about the
3 discussion we had yesterday, which at its highest
4 level was about the transfusion of whole blood and
5 blood products to today's discussion, which is
6 transfusion of components of blood. And the flow
7 of this discussion is very different than the flow
8 of yesterday's discussion at the end point.

9 Leave it for your cocktail tonight.
10 What are the aspects of this that makes us
11 comfortable that were absent yesterday or vice
12 versa? And are they even comparable issues at
13 all? So, I mean, that's just for cocktails later.
14 But it's interesting as I sit here, not as an
15 immunologist and not as a primary person, but
16 there are (inaudible)-- versus something -- you
17 know, obviously there's very big differences, but
18 --

19 DR. POLAND: I think what might be
20 different is the presumption of screening first --

21 DR. PARKINSON: Yes, yeah.

22 DR. POLAND: -- and then the presumption

1 of it being studied under protocol.

2 COMMANDER LUKE: Yes, sir. If I could
3 just jump in that the -- you could put guidelines
4 out, but without data, you can never truly say
5 whether or not we're helping, we're hurting, it's
6 neutral. So, I think it's essential that the
7 guidelines come with a reporting mechanism, so
8 that we can quickly assess what's being done,
9 who's getting it, what groups, how much, and then
10 pretty quickly we can make a determination for
11 further recommendations to either continue or to
12 stop. I think that's important.

13 DR. POLAND: I thought I saw one other.
14 Dr. Shamoo?

15 DR. SHAMOO: I just want to associate my
16 comments with David is that this is a scarce
17 resource and it's a potentially cause of problems
18 rather than solutions if you don't couple it with
19 scale up, that is, genetic engineering otherwise.
20 Just using the plasma as a source and who in the
21 world are you going to give it to?

22 CAPTAIN JOHNSTON: If I might, this is

1 Richard Johnston speaking, go for something more
2 philosophical line. I think that what Tom Luke
3 referred to is that these are things that only --
4 we only use in emergencies. And as a result,
5 they're often not studied as thoroughly as they
6 might be because there isn't the time to get these
7 studies prepared and underway before the emergency
8 is over. And I think one of the things this board
9 could quite usefully do is to recommend not
10 perhaps in just this area but in other areas where
11 similar things might apply. And one example I
12 came across recently was chlorine gas exposure
13 that actually -- an organization like the
14 (inaudible) could well prepare study protocols in
15 advance for things like this. So, there is a
16 study ready and waiting to be performed when an
17 emergency arises so that we actually can collect
18 the hard data that we need to use in these sort of
19 situations.

20 DR. POLAND: That's a good point. Okay.
21 Thank you very much, Tom.

22 COMMANDER LUKE: Thank you, sir.

1 DR. POLAND: I appreciate it and again,
2 our commendation for raising the issue. I think
3 what we'll do now is we'll take about a 15 minute
4 break or so and then we're going to have -- what?
5 Correction. We're ready to adjourn because the
6 remainder of the meeting will be just for board
7 members.

8 So, thank you everybody. This board
9 will reconvene in April of the 8th year of the
10 21st century. Happy holidays to everybody.

11 (Whereupon, the PROCEEDINGS were
12 adjourned.)

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