Update on Nuclear Test Personnel Review (NTPR) Program

Veterans' Advisory Board on Dose Reconstruction

Dr. Paul K. Blake

4:00 PM – 4:20 PM

November 8, 2006

Briefing Outline

- VBDR Impact
- Non-Radiogenic Disease Concerns
- The Road Ahead

- Projected Briefing Time: 20 minutes

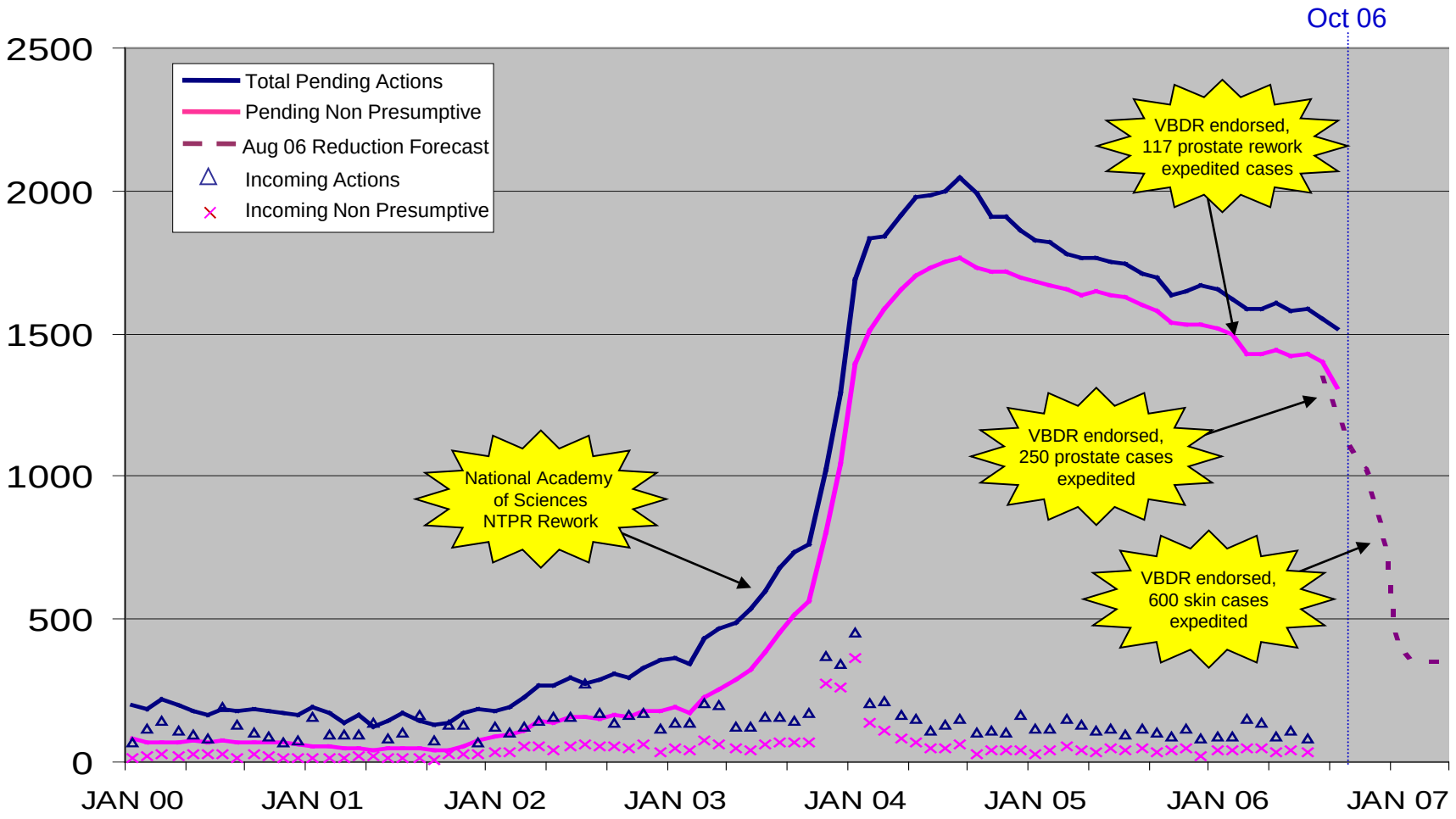
Previous VBDR Meetings

- VBDR recommendations are having a major impact on the NTPR Program:
  - In Jan 2006, the Board recommended expedited dose reconstructions for prostate rework cases. This allowed the expedited processing of 117 cases.
  - In Jul 2006, DTRA received four additional VBDR recommendations. A brief summary follows on the impact of those recommendations.

VBDR July 2006 DTRA Recommendations

Recommendation	Status/Impact
1. The VBDR recommends that NTPR develop a screening procedure for skin cases that would allow expedited processing of the those cases for which the doses are well below or well above the level likely to result in a successful claim. Worst case upper bounds should be used in this screening procedure to provide the veteran the maximum benefit of the doubt.	• Screening procedures developed • 600 backlogged cases to be completed by Jan 2007 and the time reduced to complete future cases from **6 months to 1 month** • Approx. $7M immediate savings and $1M future annual savings
2. The VBDR recommends that NTPR also develop a screening procedure for prostate cancer cases that would allow expedited processing of those cases for which the doses are well below the level likely to result in a successful claim.	• Screening procedures developed • 250 backlogged cases to be completed by Nov 2006 and the time reduced to complete future cases from **6 months to 4 months** (exposure scenarios still required) • Approx. $2.5M immediate savings and $1M future annual savings
3. The VBDR recommends that NTPR undertake a comprehensive analysis of uncertainties for all beta dose exposure scenarios.	• NTPR published paper entitled “Reconstruction of External Dose from Beta Radiation Sources of Nuclear Weapon Origin” in Health Physics Journal • NTPR released draft report entitled “Skin Doses from Dermal Contamination;” performs literature review of dermal contamination studies, discusses dose estimating approaches, performs a parametric analysis, proposes assumed probability distributions, etc.
4. The VBDR recommends that NTPR hire a consultant to write a quality assurance (QA) plan. The VBDR further recommends that NTPR develop and implement a QA program on a schedule that allows it to be integrated into the contracting process now ongoing, and the development of a comprehensive manual of standard operation procedures (SOPs) that address the necessary QA elements, including metrics.	• Consultant (ORAU) hired to co-author QA Plan (updated draft released 20 Oct 06); Quality Controls implemented in present DR process (checklists, “external” audits, etc) • QA (including metrics, SOPs, etc.) integrated in ongoing contracting process for follow-on NTPR support; QA (plan and implementation) a major evaluation factor for Award Fee • RDA SOP draft under development; draft released 27 Oct 2006

VBDR Impact


Oct 06
2500
2000
1500
1000
500
0
JAN 00
JAN 01
JAN 02
JAN 03
JAN 04
JAN 05
JAN 06
JAN 07
Total Pending Actions
Pending Non Presumptive
Aug 06 Reduction Forecast
Incoming Actions
Incoming Non Presumptive
National Academy of Sciences NTPR Rework
VBDR endorsed, 117 prostate rework expedited cases
VBDR endorsed, 250 prostate cases expedited
VBDR endorsed, 600 skin cases expedited

VBDR Impact

- For most skin cancer dose reconstructions, excluding Hiroshima & Nagasaki cases, DTRA's assigned skin dose reconstruction will exceed the applicable screening dose and is justified by:
  - The difficulties in determining an upper bound skin dose to include effects of partial showering, particle size, and skin retention factors;

VBDR Impact

- The unique exposure scenario to descending fallout and resuspended radioactive material including effects of high winds, dust, skin moisture, and other environmental factors;
- The uncertainty associated with mixed gamma and beta dose in many scenarios; and
- Calculated upper bound doses from many previous skin cancer claims exceeding the screening dose for compensation.

VBDR Impact

Screening Doses (rem) for Basal Cell Carcinoma of Skin (using IREP)

Age at Exposure (years)	Time since Exposure (years)					
	White, Non-Hispanic			Black		
	5	10	≥15	5	15	≥15
18	36	6.2	5.9	18	3.2	3.1
20	48	8.5	7.9	24	4.3	4.0
25	94	17	16	46	7.9	7.4
30	190	33	31	89	15	15
35	320	54	51	160	26	24
≥40	550	89	87	270	44	42

VBDR Impact

Screening Doses (rem) for

Squamous Cell Carcinoma of Skin (using IREP)

Age at Exposure (year)	Time since Exposure (years)					
	White, Non-Hispanic			Black		
	5	10	≥ 15	5	15	≥ 15
All	2500	310	300	1100	160	150

VBDR Impact

- VBDR recommendations to VA are also impacting DTRA. For example:
  - VA Recommendation No. 3 – Centralized Processing of Radiogenic Disease Cases.

    VA has implemented this recommendation at the VA Regional Office in Jackson, MS. Although “growing pains” are expected, significant efficiencies should occur for both VA and DTRA, ultimately resulting in improved support of our veterans.

Non-Radiogenic Disease Point Paper

- DTRA is mandated by law to perform a dose estimate for any radiogenic disease listed in 38 CFR 3.311(b)(2) which does not qualify for presumptive service connection under § 3.309.
- For any non-cancer condition not identified as radiogenic in § 3.311, VA will consider the claim as non-presumptive, provided the claimant has cited or submitted “competent scientific or medical evidence” that the claimed condition was “at least as likely as not” caused by radiation.

Non-Radiogenic Disease Point Paper

- DTRA believes the current VA-DTRA process of handling non-radiogenic disease can be improved and is requesting VBDR's review of a DTRA point paper on this subject.
- Only impacts 2% of DTRA's workload.
- DTRA's analysis of VHA medical opinions since 2003 indicates none of the non-radiogenic cases have received a favorable medical opinion.

Non-Radiogenic Disease Point Paper

- DTRA has a responsibility to be an effective steward of the Government's resources. To accomplish this role, DTRA recommends the following actions:
  - **Pending** Non-radiogenic disease claims should undergo a review by VHA to determine if:
    1. Scientific or medical evidence exists to support the claim, and
    2. Cited evidence is indeed competent (i.e. supported by lab tests, medical data, or scientific literature)
    - If not, the claim should be returned to VA for further development.
  - **Future** Non-radiogenic disease claims should undergo a similar review (as previously discussed) by VHA to determine if the condition may be induced by maximum radiation exposures received by veterans.

The Road Ahead

- While the backlog of dose reconstruction cases at DTRA is easing, it continues to be troubling. A non-expedited case averages 6 months to complete but the backlog is currently stretching out this process to as long as 2 years.
- At the same time, the NTPR Program remains focused on publishing the technical and Quality Assurance basis for our processes. Peer review of these forthcoming documents is crucial.
- Finally, VBDR and VA should consider endorsing DTRA's point paper recommendations, which can result in a more rapid backlog reduction.