



Region Scale Impacts of an Audiovisual Touch-Screen Computer-Assisted Self-Interviewing (AVT) System

P D Cumming & J C Johnston, Talisman Ltd., Vienna, VA

J V Schifano & N Watlington, West TN Regional Blood Center, Jackson, TN

L M Katz, Mississippi Valley Regional Blood Center, Davenport, IA

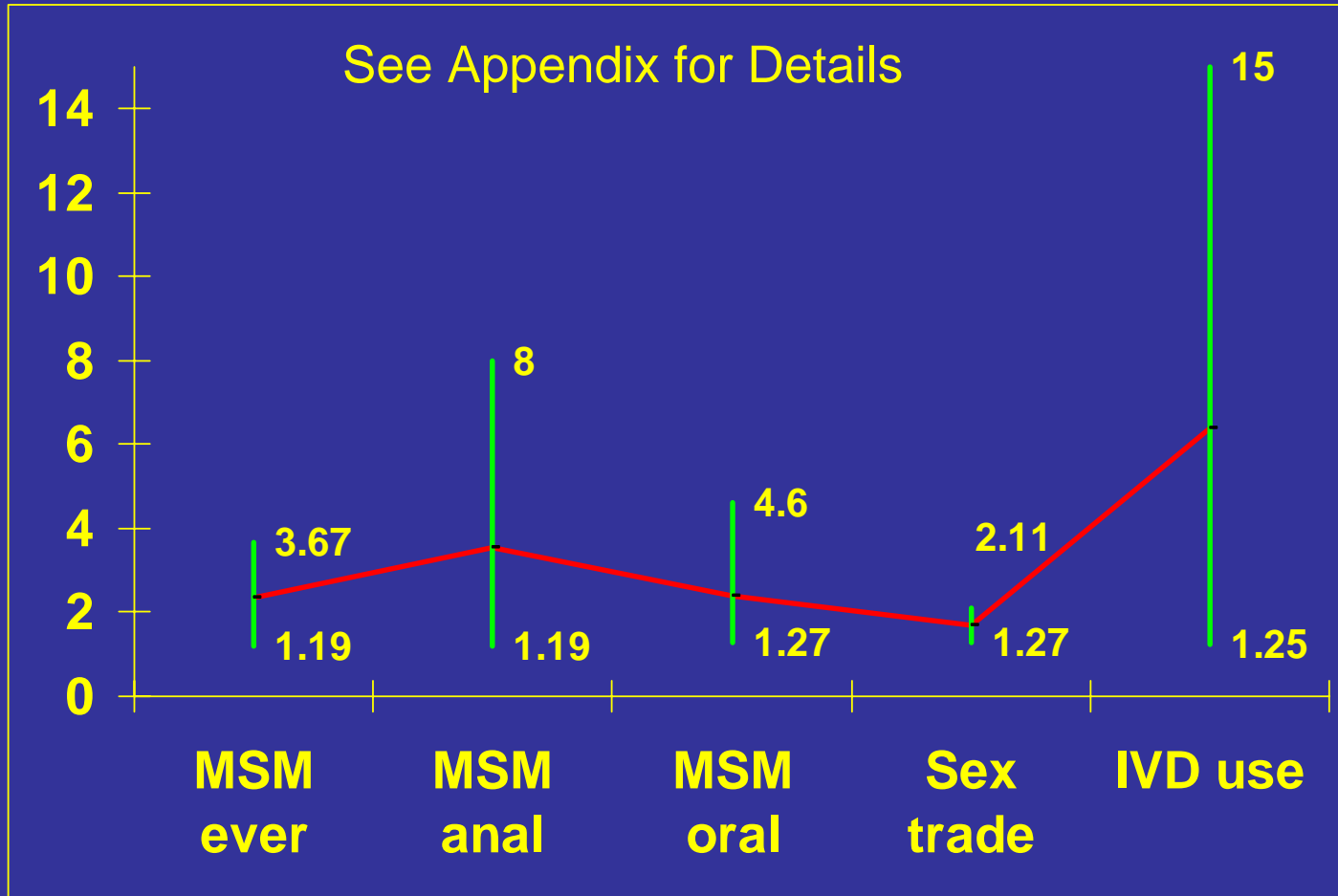
B Baskin, Lifeblood Mid-South Regional Blood Center, Memphis, TN

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Minor Edits for Standalone Web Presentation 12/11/06 PDC

Socially Sensitive Questions* Queried by Face-to-Face† Versus A-CASI‡: Multiplier Effects, Ranges & Means



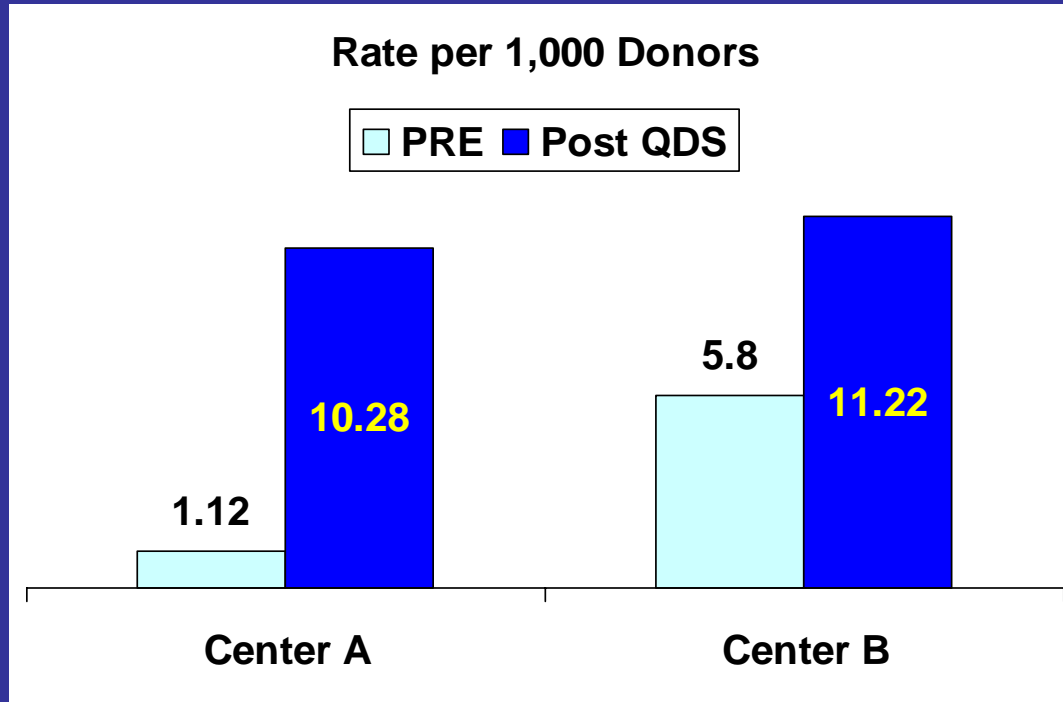
*Study populations: 3 - STD clinic patients; 2 - IVD Users; 1 - male adolescents; 1 - 1st time blood donors

† 1 study (Turner et al, 1998) male adolescents, compared A-CASI to paper self-interview questionnaire, not face-to-face

‡ 1 study (Katz et al, 2005) used AVT-CASI technology compared to face-to-face - - - 10/18/06 JCJ/PDC

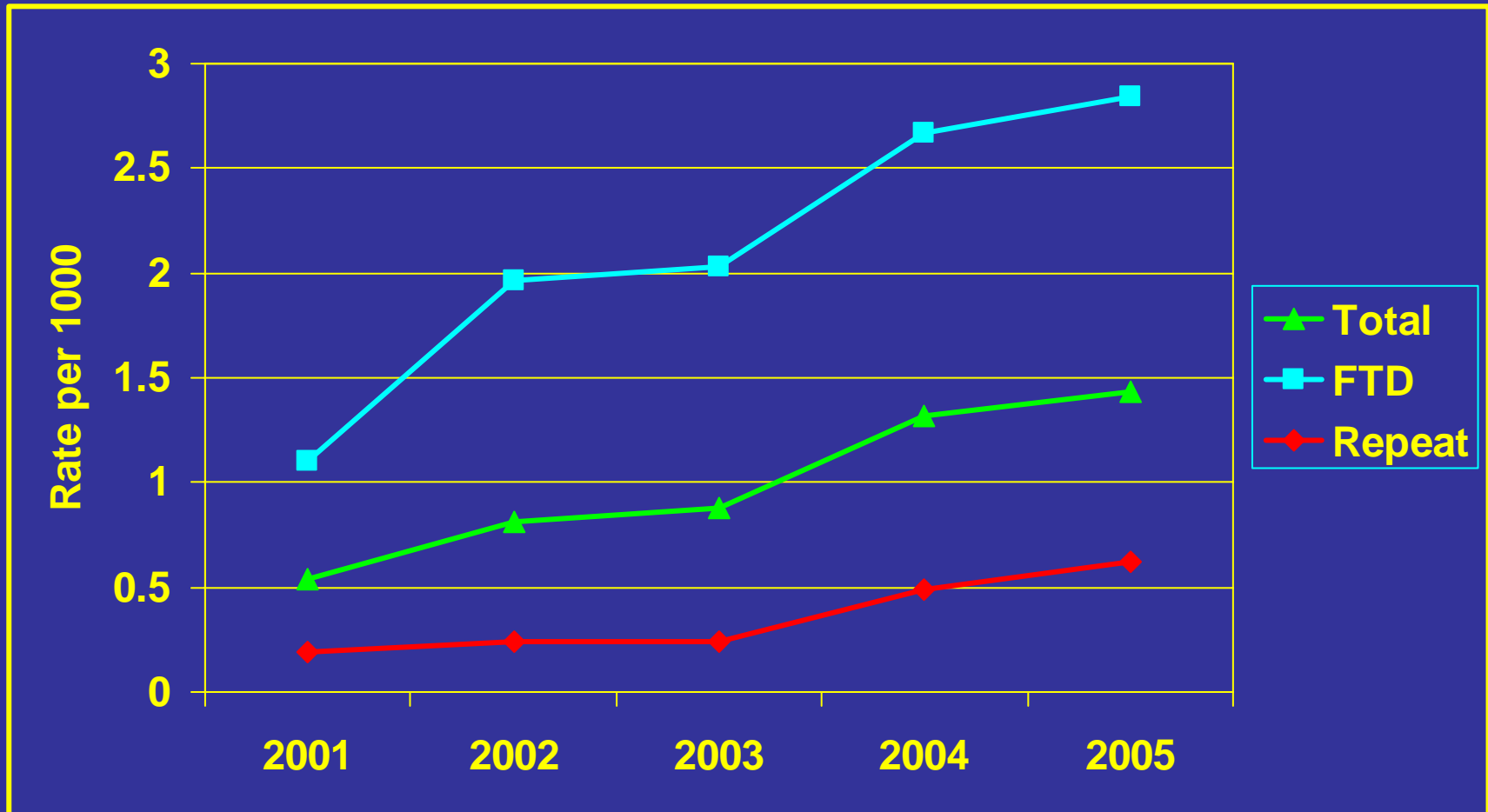
All High-risk Behavior Deferrals of First Time Donors Pre and Post QDS

Deferrals for HIV and STD risks, excludes tattoos, body piercing, and other blood exposure



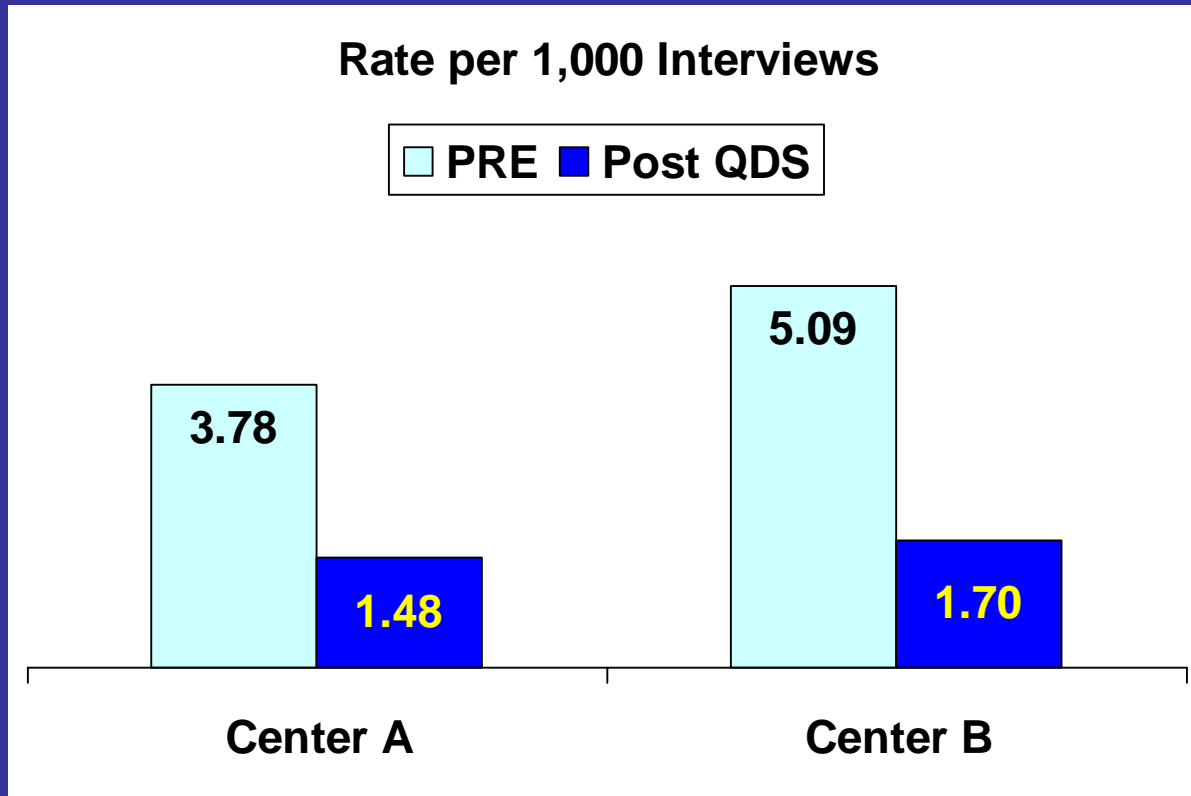
| | Center A | | Center B | |
|-------------------------------------|-------------|------|-------------|------|
| | PRE | QDS | PRE | QDS |
| Number of high-risk deferrals = | 1 | 19 | 31 | 60 |
| Number of total first-time donors = | 890 | 1849 | 5346 | 6149 |
| p = | 0.017 | | 0.0004 | |
| OR = | 9.15 | | 1.94 | |
| 95% CI = | 1.3 – 183.8 | | 1.02 – 2.85 | |

Permanent (Only) High Risk Deferrals: Center C Deferrals per 1000 Donors



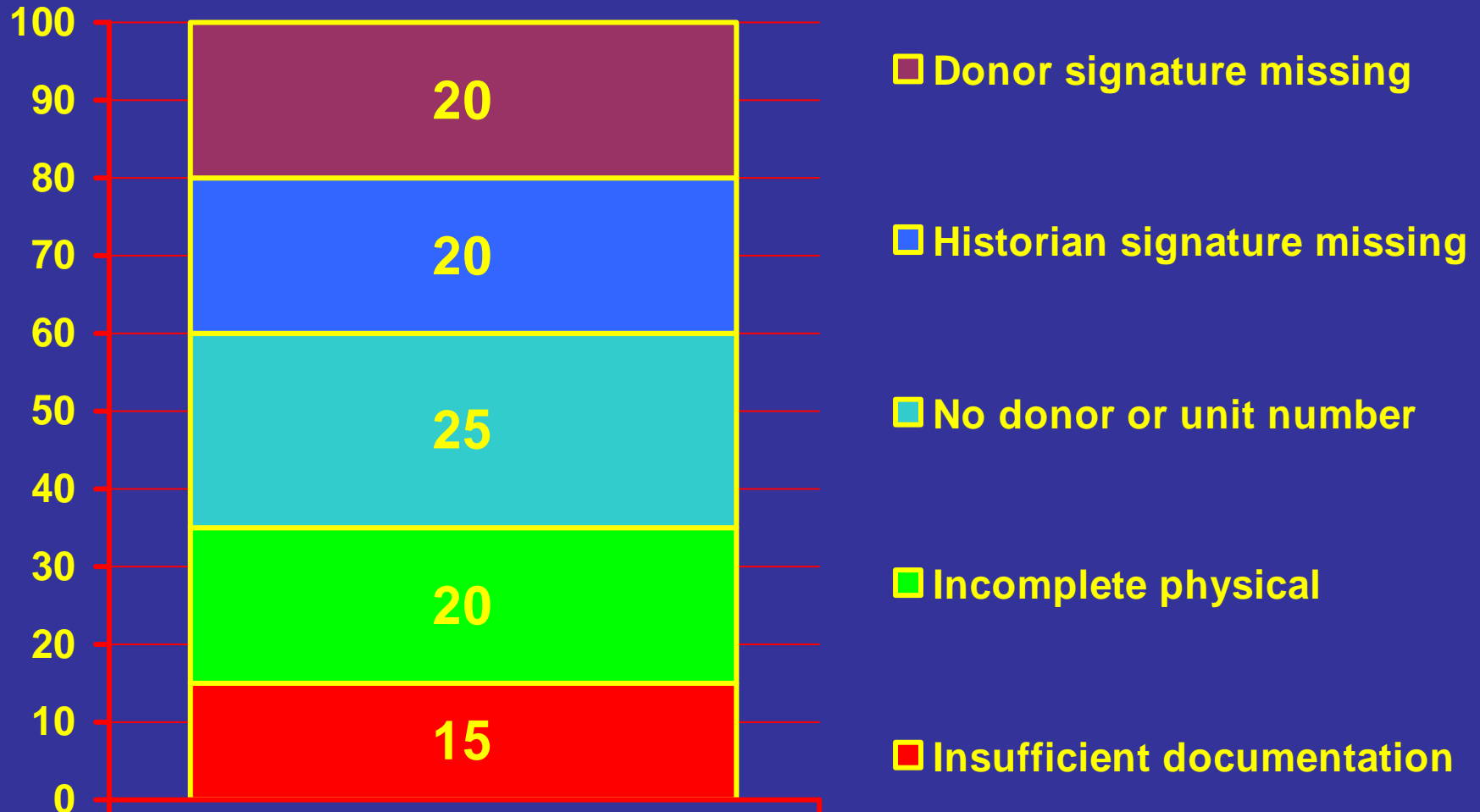
2001 and 2002 center specific donor history questionnaire. Transition to QDS UDHQ during 2003. 100% QDS in 2004. Total high risk questions were 13 pre QDS and 15 post QDS/UDHQ. Permanent deferral questions: 3 pre and post QDS

Reductions in Staff Errors and Omissions Post QDS

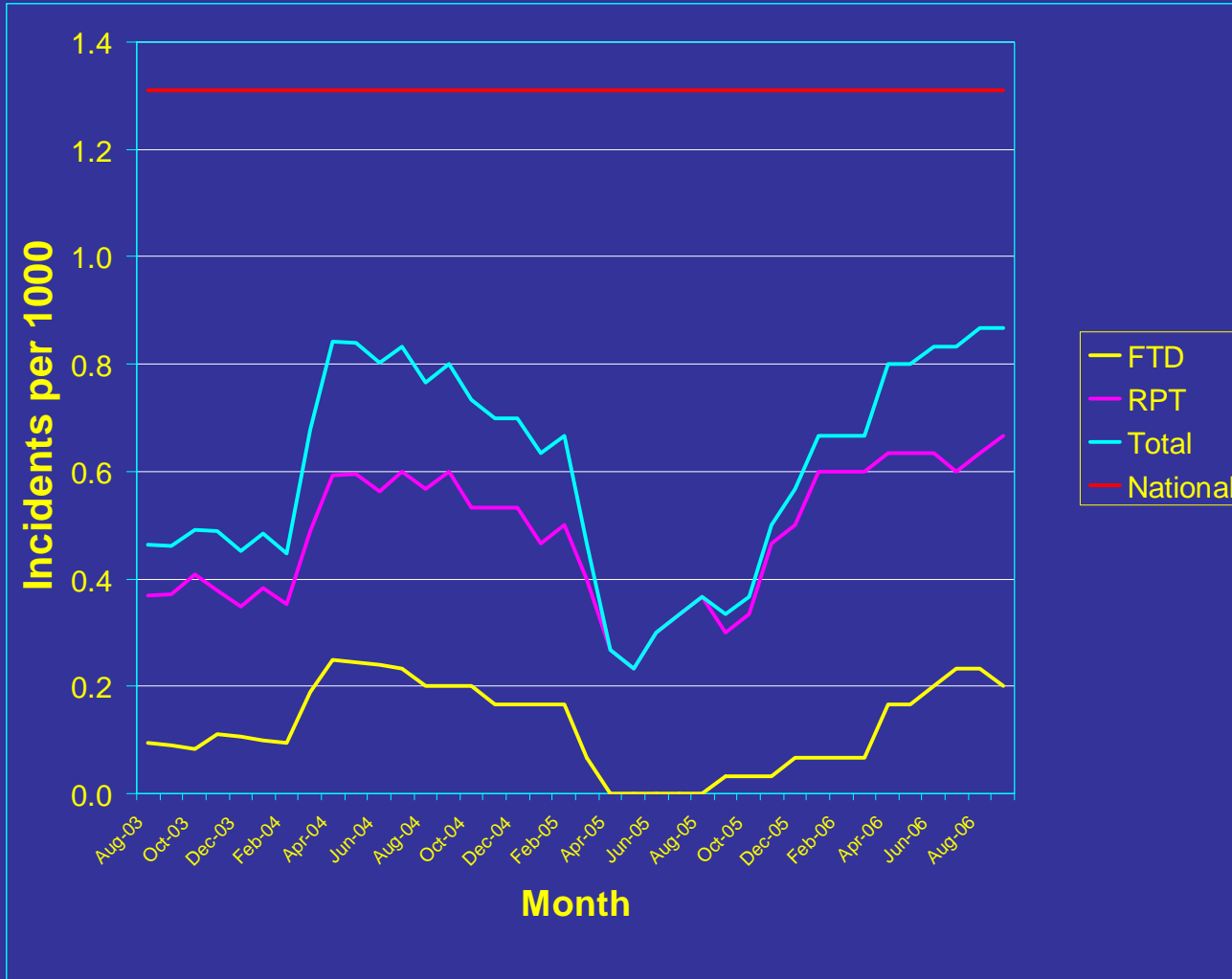


| | Center A | | Center B | |
|--------------------------------------|-------------|--------|-------------|--------|
| | PRE | QDS | PRE | QDS |
| Interviews with error or omissions = | 250 | 20 | 170 | 58 |
| Error-free interviews = | 65,934 | 13,542 | 33,200 | 34,124 |
| 2 sided p (Chi Square) = | 0.00004 | | 5.39 E-14 | |
| OR = | 0.39 | | 0.33 | |
| 95% CI = | 0.24 – 0.63 | | 0.17 – 0.49 | |

85% of residual errors & omissions will be eliminated by planned upgrades (2002 analysis and basis for 2006 QDS R2.03)



12 Mo. Moving Average PDIs at Center B (Scaled to per 1000 Donations)



100% QDS interviewing achieved August 2003. New UDHQ implemented January/February 2005

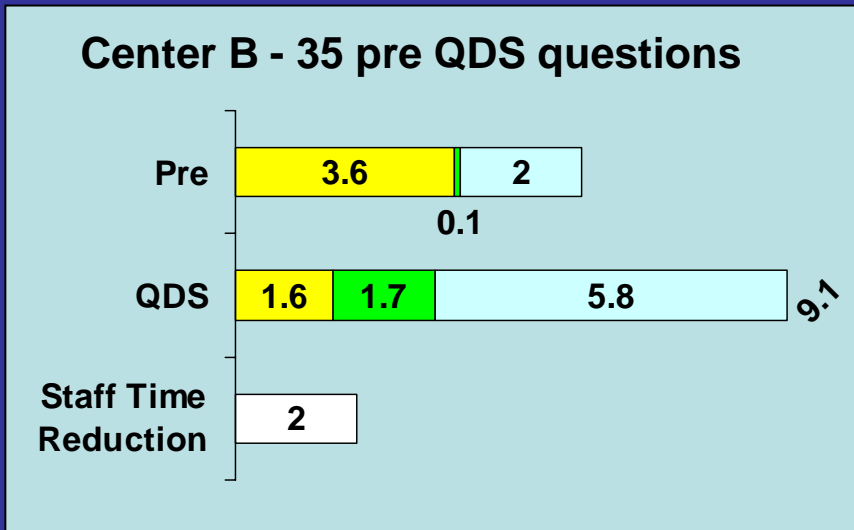
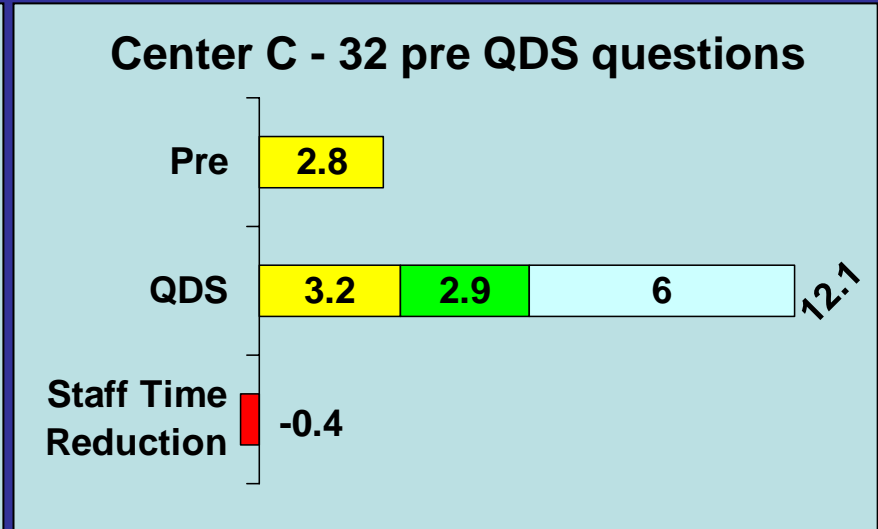
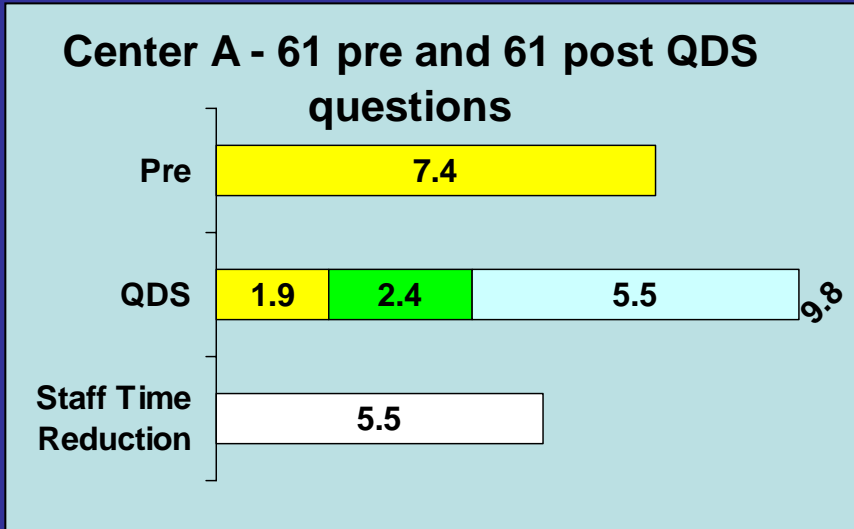
Rate of Blood Units Testing Positive on Initial Screening Tests First Time Donors – Center B

| | Pre QDS (2002) | Post QDS (2004) | Difference |
|-----------|-------------------|--------------------|------------|
| Number | 134 | 112 | -16.4% |
| Rate/1000 | 25.07 | 18.21 | -27.33%* |

* Statistical Significance: Chi-Square = 54.71, $df = 1$, $p < .001$

Average Time (in minutes) Required per Donor Interview at Three Regional Blood Centers

■ FTF Donor and Staff
 ■ Donor Wait
 ■ Donor AVT-CASI
 ■ Staff Time Reduction



- QDS = 61 standard AABB questions
- Center A: PRE = 61 FTF questions
- Center B: PRE = 35 questions, 16 paper self administered plus 19 staff administered FTF
- Center C: PRE = 32 questions, 19 paper self administered plus 13 staff administered FTF

Summary & Conclusions (1 of 2)

1. CASI improvements appear to be impacted by:
 - Sample Population, e.g., STD clinic patients vs. blood donors, males vs. females
 - Sample Size
 - Comparative Interview Method, i.e., paper vs. face-to-face
 - Specific Socially Sensitive Question, e.g., sex trade vs. IVDU
 - Specific A-CASI Technology, e.g., vs. QDS AVT-CASI
2. Risky behavior self reporting by blood donors (rate/1000) may be very different pre QDS AVT-CASI but is quite similar post QDS (10 or 11/1000)
3. QDS staff error reductions are large (e.g., 61% to 67%) and can be improved substantially with experience. (Current version should increase to over 90% reduction.)

Summary & Conclusions (2 of 2)

4. QDS staff time savings vary greatly depending on pre QDS interview methods, i.e., face-to-face vs. paper & pencil vs. combination
5. QDS results in increased PDI reporting due to memory enhancement of multimedia and/or increased attention
6. NHLBI supported large studies underway at 5 centers with expanded set of performance variables, including reductions in transmissible test positive results.

Data Appendix to Slide 2: Variability in Responses to Socially Sensitive Questions

(Originally a hand out during AABB presentation October 22, 2006)

Any Male-Male Sex

| Face-to-Face* | ACASI* | Multiplier | Study |
|---------------|--------|------------|--------------------------|
| 50 | 100 | 2.00x | 1. DeJarlais et al, 1999 |
| 28 | 37 | 1.32x | 2. Kurth et al, 2004 |
| 4 | 14 | 3.50x | 3. Ghanem et al, 2005 |
| 85 | 101 | 1.19x | 4. Rogers et al, 2005 |
| 15** | 55 | 3.67x | 5. Turner et al, 1998 |

1. DeJarlais, Paone & Milliken, 1999; Used injecting IVDUs, N=1481, Males/Females
2. Kurth, Martin, Golden et al, 2004; Used STD clinic patients, N=609, Males/Females
3. Ghanem, Hutton, Zimba & Erbelding, 2005; Used STD clinic patients, N=671, Males/Females
4. Rogers, Willis, Al-Tayyib, et al, 2005; Used STD clinic patients, N=1350, Males/Females
5. Turner, Ku, Rogers, et al, 1998; Used adolescents, N=1690, Males

Male-Male Anal Sex

| Face-to-Face* | ACASI* | Multiplier | Study |
|---------------|--------|------------|------------------------|
| 659 | 787 | 1.19x | 1. Kurth et al, 2004 |
| 65 | 206 | 3.17x | 2. Ghanem et al, 2005 |
| 104 | 117 | 1.79x | 3. Rogers et al, 2005† |
| 10** | 80 | 8.00x | 4. Turner et al, 1998 |

1. Kurth, Martin, Golden et al, 2004; Used STD clinic patients, N=609, Males/Females
2. Ghanem, Hutton, Zimba & Erbelding, 2005; Used STD clinic patients, N=671, Males/Females
3. Rogers, Willis, Al-Tayyib, et al, 2005; Used STD clinic patients, N=1350, Males/Females
4. Turner, Ku, Rogers, et al, 1998; Used adolescents, N=1690, Males

Male-Male Oral Sex

| Face-to-Face* | ACASI* | Multiplier | Study |
|---------------|--------|------------|------------------------|
| 410 | 560 | 1.36x | 1. Ghanem et al, 2005 |
| 443 | 562 | 1.27x | 2. Rogers et al, 2005† |
| 50** | 117 | 1.79x | 3. Turner et al, 1998 |

1. Ghanem, Hutton, Zimba & Erbelding, 2005; Used STD clinic patients, N=671, Males/Females
2. Rogers, Willis, Al-Tayyib, et al, 2005; Used STD clinic patients, N=1350, Males/Females
3. Turner, Ku, Rogers, et al, 1998; Used adolescents, N=1690, Males

Transactional Sex

| Face-to-Face* | ACASI* | Multiplier | Study |
|---------------|--------|------------|--------------------------|
| 4 | 8 | 2.00x | 1. Dejarlais et al, 1999 |
| 98 | 207 | 2.11x | 2. Kurth et al, 2004 |
| 101 | 133 | 1.32x | 3. Ghanem et al, 2005 |
| 257 | 327 | 1.27x | 4. Rogers et al, 2005† |

1. DeJarlais, Paone & Milliken, 1999; Used injecting IDUs, N=1481, Males/Females
2. Kurth, Martin, Golden et al, 2004; Used STD clinic patients, N=609, Males/Females
3. Ghanem, Hutton, Zimba & Erbelding, 2005; Used STD clinic patients, N=671, Males/Female
4. Rogers, Willis, Al-Tayyib, et al, 2005; Used STD clinic patients, N=1350, Males/Females

Injecting Drug Use

| Face-to-Face* | ACASI* | Multiplier | Study |
|---------------|--------|------------|--------------------------|
| 4 | 8 | 2.00x | 1. DeJarlais et al, 1999 |
| 1.12 | 10.28 | 9.18x | 2. Katz et al, 2005 |
| 129 | 161 | 1.25x | 3. Kurth et al, 2004 |
| 9 | 21 | 2.33x | 4. Rogers et al, 2005† |
| 3** | 45 | 15.0x | 5. Turner et al, 1998 |
| 67 | 147 | 2.18x | 6. Metzger et al, 2000‡ |

1. DeJarlais, Paone & Milliken, 1999; Used injecting IDUs, N=1481, Males/Females
2. Katz, Cumming, Wallace & Abrams, 2005; Used prospective blood donors, N=2739, Males/Females
3. Kurth, Martin, Golden et al, 2004; Used STD clinic patients, N=609, Males/Females
4. Turner, Ku, Rogers, et al, 1998; Used adolescents, N=1690, Males
5. Rogers, Willis, Al-Tayyib, et al, 2005; Used STD clinic patients, N=1350, Males/Females
6. Metzger, Koblin, Turner, et al, 2000; Used gay male IDUs , N=2877

Footnotes

- * Numbers reflect positive responses per 1000 interviewees
- ** Turner used self-administered paper questionnaires
- † Sample included males and females
- ‡ Question was whether they used a needle after another user without cleaning

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Additional Contributors

- Denise Jones, RN HP(ASCP)
Lifeblood Mid-South Regional Blood Center, Memphis, TN
- Philip S. Abrams, PhD
- Wendy R. Jogasurya, MS
Talisman Limited

For Additional Information Contact :
Paul D. Cumming, MBA/PhD

 (703) 938-0300
pc@talmed.com

<http://www.talmed.com>