Bar Code Medication Administration Quality Assurance
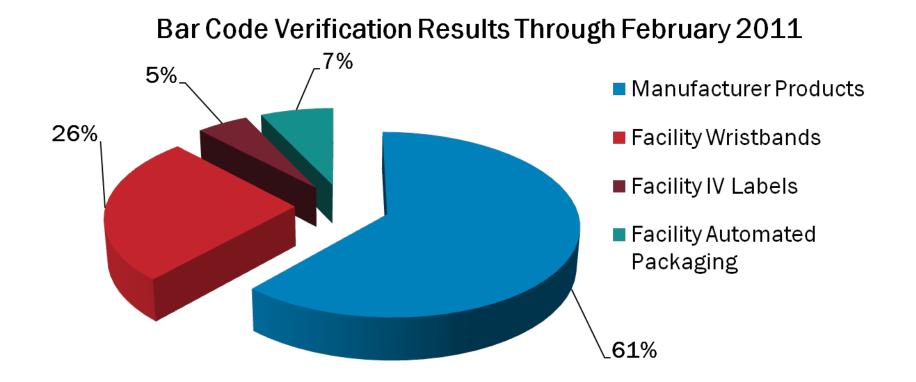
GS-1 Global Conference

Chris L Tucker, RPh

Director, Bar Code Resource Office

Department of Veterans Affairs

VA Addresses Bar Code Quality

- September 2004
  - Developed "Closed Loop" bar code verification procedures
- October 2004
  - Established bar code verification labs
- March 2005
  - Bar Code Quality clause added to VA contract vehicles
- May 2005
  - Annual wristband verification testing conducted for all VHA facilities
- February 2006
  - Bar Code Quality Directive distributed
- December 2006
  - All scanners, bar code printers, and bar code print media must meet minimum standards of the Bar Code Resource Office to be approved for purchase
- March 2009
  - Automated data capture of bar codes not scanning at the point of care

Closed Loop Verification Results

Bar Code Verification Results Through February 2011

- 5%
- 7%
- 26%
- 61%

Legend:
- ■ Manufacturer Products
- ■ Facility Wristbands
- ■ Facility IV Labels
- ■ Facility Automated Packaging

Total verification tests = *617*
Different Manufacturers / Suppliers = *58*
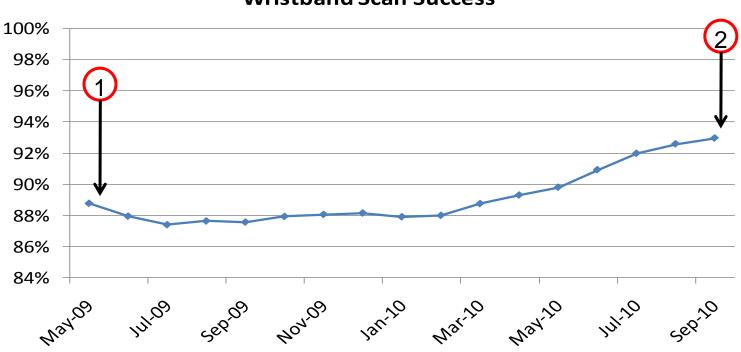Letters to suppliers & contracting authorities = *65*

Managing Scanning Failures

- Automated data capture of scanner by-pass – March 2009

  - Quantifies wristband and medication scan success and failure

  - Identifies the most problematic products at the point of care

  - Identifies database irregularities in real time

  - Identifies substandard bar code quality products through filtering

Managing Scanning Failures National Report

◄◄ ◄ 1 of 284 ► ►►	100% ▼		Find | Next	💾▾ ⟳ 🖶 🏢			

Managing Scanning Failures - VHA Summary

VSSC Help Desk   Data Definitions   Return to MSF Report Page   Data Current thru November 2010

National Managing Scanning Failures Data for NOV-FY11

Wristband Scans	Total	By Pass Sub Total	Count	Percent	
All Wristband Scan Attempts	4,785,198				
....Wristband Scan			4,457,062		93.14%
..All By-Passed Wristband Scans		328,136		6.86%	
....Wristband By-Pass Keyed Entry			246,558		5.15%
....Wristband By-Pass BCMA Unable to Scan Option			81,578		1.7%

Medication Scans	Total	By Pass Sub Total	Count	Percent	
All Medication Scan Attempts	16,043,433				
....Medication Scan			15,678,493		97.73%
..All By-Passed Medication Scans		364,940		2.27%	
....Medication By-Pass Keyed Entry			178,134		1.11%
....Medication By-Pass BCMA Unable to Scan Option			180,477		1.12%
....Medication By-Pass Vista Manual Med Entry Option			6,329		0.04%

Wristband Impact

Wristband Scan Success

1 – May 2009 – Baseline Patient Wristband Scan Success
2 – Sept 2010 - Patient Wristband Scan Success

Wristband Scan Success Rate

- May 2009 - 88.8% scan success rate
- 177,060 wristbands scanned daily
  - 19,866 "Unable to Scan" per day
  - 10 seconds to report "Unable to Scan"
    - 55 hours per day expended
- Sept 2010 - 92.9% scan success rate
- 162,942 wristbands scanned daily
  - 11,471 "Unable to Scan" per day
  - 10 seconds to report "Unable to Scan"
    - 32 hours per day expended
- 23 hours per day returned to staff

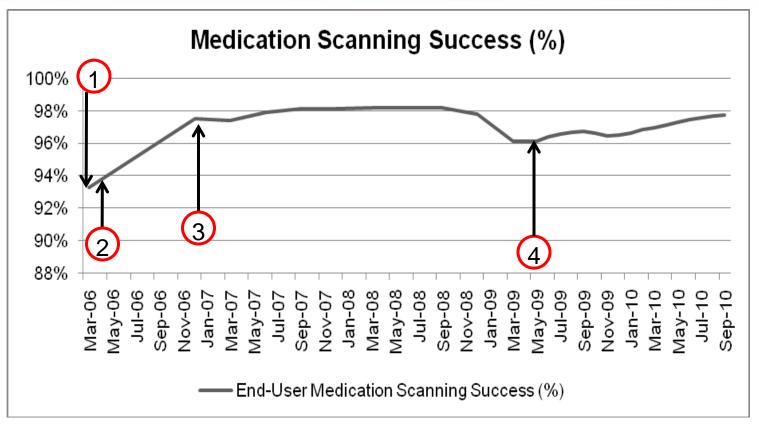# Managing Scanning Failures National Report

Managing Scanning Failures - VHA Summary

VSSC Help Desk   Data Definitions   Return to MSF Report Page   Data Current thru November 2010

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Managing Scanning Failures "Unable to Scan" Medication Reports

Medication Unable to Scan - Drug Listing	Count	Percent
ARTIFICIAL TEARS POLYVONYL ALCOHOL	2,041	0.95%
ALBUTEROL 90/IPRATROP 18MCG 200D PO INHL	1,908	0.89%
INSULIN,ASPART,HUMAN 100 UNIT/ML INJ	1,746	0.82%
OMEPRAZOLE 20MG EC CAP	1,511	0.71%
ALBUTEROL 90MCG (CFC-F) 200D ORAL INHL	1,145	0.54%
ACETAMINOPHEN 325MG TAB	894	0.42%
COLLAGENASE 250 UNT/GM TOP OINT	870	0.41%
BISACODYL 10MG RTL SUPP	784	0.37%

Medication Unable to Scan - Medication by Facility	Count
Count of ACETAMINOPHEN 325MG TAB for FEB-FY10 for all facilities	
(R07) (19) VA Facility - 19	235
(R16) (80) VA Facility - 80	119
(R05) (12) VA Facility - 12	92
(R23) (36) VA Facility - 36	90
(R04) (46) VA Facility - 46	57
(R06) (52) VA Facility - 52	48
(R20) (63) VA Facility - 63	46
(R10) (52) VA Facility - 52	44
(R09) (26) VA Facility - 26	19
(R08) (72) VA Facility - 72	17
(R01) (89) VA Facility - 89	16
(V02) (28) VA Facility - 28	13

Medication Impact

1 – Baseline Measurement

2 – Federal Drug Administration Bar Code Labeling regulation goes into full effect

3 - First Quarterly report from Bar Code Quality Program

4 - Managing Scanning Failures Automated Data Capture

Medication Scan Success Rate

- May 2009 - 96.1% scan success rate
- 551,100 medications scanned daily
  - 21,272 meds reported "Unable to Scan" daily
  - 10 seconds to report "Unable to Scan"
    - 59 hours per day expended
- Sept 2010 - 97.7% scan success rate
- 542,773 medications scanned daily
  - 12,430 meds reported "Unable to Scan" daily
  - 10 seconds to report "Unable to Scan"
    - 35 hours per day expended
- 24 hours per day returned to staff

Managing Scanning Failures = Patient Safety

- Non-scanning medications and wristbands waste time
  - Takes time away from other nursing duties
  - Takes time away from other pharmacy duties to troubleshoot
  - One wristband scan leads to 3.23 medication scans
    - Each non-scanning wristband triples risk for medication error

Overall Impact

- 24 hours returned to staff daily from improved medication scanning

- 23 hours returned to staff daily from improved wristband scanning

- 47 hours daily returned to nursing care
  - 17,155 hours returned per year
  - 8.24 Full Time Employees (FTE)

Questions:

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