

Risk Prediction and Mitigation Across Veterans Health Administration's Sterile Processing Services

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SPS RiTMS development process was supported by a team of VA/healthcare domain specialists, biomedical and VAMC infrastructure subject matter experts, and data scientists

Building the Predictive Model & Identifying Risks

VAMC PREDICTIVE RISK MODEL

Environmental Scan

Interview NPOSP & Stakeholders

Expert Panel/ Develop KPIs

1 01

Develop Field Survey to Inform KPIs

KPI FACTORS AND WEIGHTING

Each question was assigned the KPI weight and grouped into factors to show percent contribution. Factors included: Facilities (F1, F2), Leadership (L1, L2, L3), Logistics (Log1), Maintenance (M1), Operations (O1), Staffing (S1), and Toll Gates (T1, T2, T3). Responses to Question KPI Weight KPI Factor KPI Weight KPI Factor SPS Standalone HVAC VAMC permanent ADPCS 3 TT2 SPS Report to ADPCS itical water systems installed (final a Year SPS last renovated (years since) Level of emergency power provid VA Design guide used during renovation Means to control and monitor temp/R Years in position – SPS Chief Scope rooms meet 2015 VA Design Guide 2 F2 SPS Satellite location Years in position – Asst SPS Chief %SPS Staff Level II Certified 2 L2 Years in position – ADPCS SPS Chief Level II Certified Full time Assistant SPS Chi SPS Chief Grade Assistant SPS Chief Level II Certified Automated RME tracking system C Findings – Critical/Semi RME (EC or IC) Special purpose funding (2018, 2019, 2020) stics using inventory management sys ritical water system means of maintenance urrent instrument just in time contra 2 01 Where scopes are processed t instrument preventive maintenance contract Temp/RH Alarms sent to SPS Chief How sterilizers are maintained

How count sheets are used

Number of times count sheets signed

FIELD SURVEY

Percent Staffing (Calculated

Full time SPS Chief

Department of Veteran Affairs Veterans Health Administration Sterile Processing Services (SPS) Field Survey	U.S. Department of Veterans Affairs	Facility: 0 Facility ID: VISN:							
Instructions to SPS Chief Completing Survey: If you are a healthcare system that has more than one SPS Chief, each SPS Chief needs to complete one survey that includes information for their respective site(s). Please complete the administrative section and then answer all questions as completely as possible; use drop down menus or enter whole numbers (e.g. no decimal) when indicated. If your answer contains a decimal point less than 0.5, round your answer down to the next lowest whole number. If your answer contains a decimal point that is 0.5 or greater round up to the next highest whole number. After completing the survey please save the document using the following naming convention: Region_VISN_Facility Number_Healthcare System location_SPS Field Survey.									
Administrative Section	Response	Comments/Que	stions						
Please select your facility from the drop down menu									
Date of Survey Completion									
Name of person completing the survey									
Title of person completing the survey									
E-mail of person completing the survey									
SPS Staffing	Response	Comments/Que	stions						
 Number of currently filled Full Time Equivalent Employees (FTEE) in SPS including Chief (Enter whole #) 									
2 Number of vacancies approved for recruitment (Enter whole #)									
3 Number of staff actively being recruited (Enter whole #)									
4 Number of FTEE (from approved organization chart) (Enter whole #)									
5 Number of full time contracted staff (Enter whole #)									
SPS Leadership	Response	Comments/Que	stions						

• Field data survey was distributed to facilities to collect performance inputs

• The self-reported data was used to develop the risk profile

SPS RITMS MODEL DESIGN

The SPS RiTMS Model calculates relative contribution to the grouped factors:

- Provides a direct measure of impact to overall model score • Enables future model calibration based on observed findings through
- use of multiplier (currently set to "1") • Directs attention to most critical factors

Factor S1 – Staffing (Percent Staffed)

F1- Facilities (RO/DI, Temp/RH, HVAC, EM Power)

- F2- Facilities (Year Renovated, Design Guide, Scope Rooms 2015 Design Guide) 1-Leadership (Years in Position: ADPCS, SPS Chief, SPS Asst Chief, Off-Site locations oversee) .2-Leadership (SPS Chief – Full Time, Asst, Grade; Level II Cert Chief, Asst, Staff; TJC Findings)
- L3-Special Purpose Funding (Normalized to Current Staffing FY 18,19,20)
- Log1-Logistics (RME Tracking, GIP)
- M1-Maintenance (JIT Sharpening, Prev Maint Repair/Sharpening, SPS Water Maintenance) D1-Operations (Alarm Notifications, Scopes Processed, Count Sheets)
- Toll Gates (Full Time SPS, Permanent ADPCS, SPS Reporting) Negative Scoring

CALCULATING FINAL SCORE

Once each Final Score from Each Factor is calculated:

- All factor final scores are added together to obtain the final SPS
- RiTMS Score for the site • Each factor includes multiple KPIs
- scores if the site answered contrary to the majority:
- -21 Sites received negative scores: -2 to -8

-1 Site scored -8, and 5 sites scored -6 All scores were normalized to provide a

- All scores were multiplied
- by 1.12 to normalize

Actions Taken and Plans to Reduce Risk

Analyzed scores for high-risk and very high-risk facilities:

- •Conducted one-on-one meetings with VISN and VAMC Leadership to discuss high-risk and very high-risk scores
- •Visited selective VAMCs to validate data and to support improvement efforts
- •Updated and resubmitted field survey in FY21
- •Analyzed updated FY21 field survey responses

- - (previously described) • Toll Gates contribute negative

final highest score of 97



Actions taken by NPOSP after initial RiTMS scores were established resulted in a decrease for high-risk facilities:

- •Very high-risk facilities reduced from 17 to 12
- •High-risk facilities reduced from 23 to 17
- •Elevated-risk facilities increased from 26 to 41
- •Moderate-risk facilities reduced from 45 to 36
- •Low-risk facilities increased from 18 to 21
- •Very low-risk facilities increased from 11 to 12



PROGRAM OVERVIEW

Using the Risk Identification, Triage, Mitigation, and Sustainment (RiTMS) model along with a comprehensive assessment of VA medical facilities, VHA's National Program Office for Sterile Processing (NPOSP) can identify medical facilities at high risk for an untoward event; take actions to mitigate risk and strengthen local operations; and sustain improvement through continuous evaluation. NPOSP continues to refine and validate the RiTMS process, and it has become an integral tool for NPOSP operations and program management.

Compare Predictive and Actual Scores

- The SPS RiTMS Assessment Toolkit is made up of:
- Assessor's Guide
- Opening/Closing Briefings • Five Tracers
- Final Site Visit Report with Roadmap to Success





Predictive Model







Site Visit Report

RISK MITIGATION AND SUSTAINMENT

Build Roadmap for Success

THE MODEL WAS VALIDATED BY COMPARING PREDICTIVE SCORES VS ASSESSMENT SCORES

- •19 of the 24 sites assessed were within 8 points of predictive score
- •15 of the 24 sites were within 3 points or less of predictive score

VA Medical Center	Facility Complexity	Predictive Scores	Assessment Scores	Difference	VA Medical Center	Facility Complexity	Predictive Scores	Assessment Scores	Difference
1	1a	57	67	10*	13	1b	77	60	17*
2	1a	94	95	1	14	1b	67	72	5
3	1a	65	68	3	15	1b	97	70	27*
4	3	49	57	8	16	2	55	58	3
5	1b	60	66	6	17	1a	73	73	0
6	3	54	65	11*	18	1a	55	65	10*
7	2	70	70	0	19	1c	66	63	3
8	3	59	59	0	20	1a	57	54	3
9	1c	62	64	2	21	1a	73	71	2
10	1b	78	63	15*	22	1a	60	60	0
11	1b	75	74	1	23	1c	70	70	0
12	1c	61	61	0	24	3	72	72	0

FY20 SPS RITMS SCORE BREAKPOINTS AND SPREAD



Results of Actions Taken



FY21 SPS RITMS SCORE BREAKPOINTS AND SPREAD





Validating the Predictive Model

Collaboratively Reduce Risk with VAMC

Define VAMC Performance Measures

Monitor and Test VAMC Performance

• The RiTMS Predictive Model was validated based on results of 24 site assessments

Note: 3 of the 6 sites with a difference of 10 points or more, were due to errors in the self-reported data impacting the predictive score

VAMCs were surveyed to validate and test the predictive model

