

Introduction

Multidrug-resistant organisms (MDROs) represent a significant problem in healthcare. They can cause infections which are difficult to treat and are associated with increased morbidity, longer length of stay, higher risk of mortality, and increased healthcare costs. In particular, *Candida auris* is an emerging drug-resistant yeast with high outbreak potential in healthcare settings. Identifying patients who are colonized with MDROs is important to ensure the correct isolation is in place to prevent transmissions. Shirley Ryan AbilityLab (SRLab), an inpatient rehabilitation hospital located in Chicago, Illinois, has an MDRO Admission Screening Policy that identifies patients at risk for MDRO colonization. Historically, this policy included screening for methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant *Enterococci* (VRE) with a policy compliance of around 60%. The goals of the current project were to add *C. auris* to the admission screening program, improve policy compliance, and assess incidence of MRSA, VRE, and *C. auris* colonization.

Methods

Study Design

A Plan-Do-Study-Act design was utilized to improve the MDRO Screening program at SRLab between May 2023 to December 2023.

Policy Changes

The MDRO Admission Screening policy was revised to streamline the screening criteria and include *C. auris* as one of the organisms screened. Education was provided to medical and nursing staff.

Prior MDRO Admission Screening Policy

High-risk device: Indwelling urinary catheter, central line, tracheostomy

Receiving dialysis or peritoneal dialysis

Admitting from a long-term care hospital or skilled nursing facility

Admitted with a stage 3 or greater pressure ulcer not including unstageables or deep tissue injuries

Receiving chemo/radiation treatment, scheduled to receive chemo/radiation in the next 3 months or completed chemo/radiation treatment within 3 months

Solid organ transplant within the last 3 months

Screened for: MRSA, VRE

Revised MDRO Admission Screening Policy

High-risk device: Indwelling urinary catheter, central line, tracheostomy

Admitted with a stage 3, 4, or unstageable pressure injury

Admitted to an oncology or transplant hospital service

Screened for: MRSA, VRE, *C. auris*

Methods, cont.

Information Systems (IS) Updates

A new order was created for *C. auris* screening. In addition, "Reason for Screening" was included as part of the order for MRSA, VRE, and *C. auris* surveillance swabs to identify screening criteria met. All changes and order updates were validated to ensure accuracy of electronic surveillance monitoring so that results could be tracked.

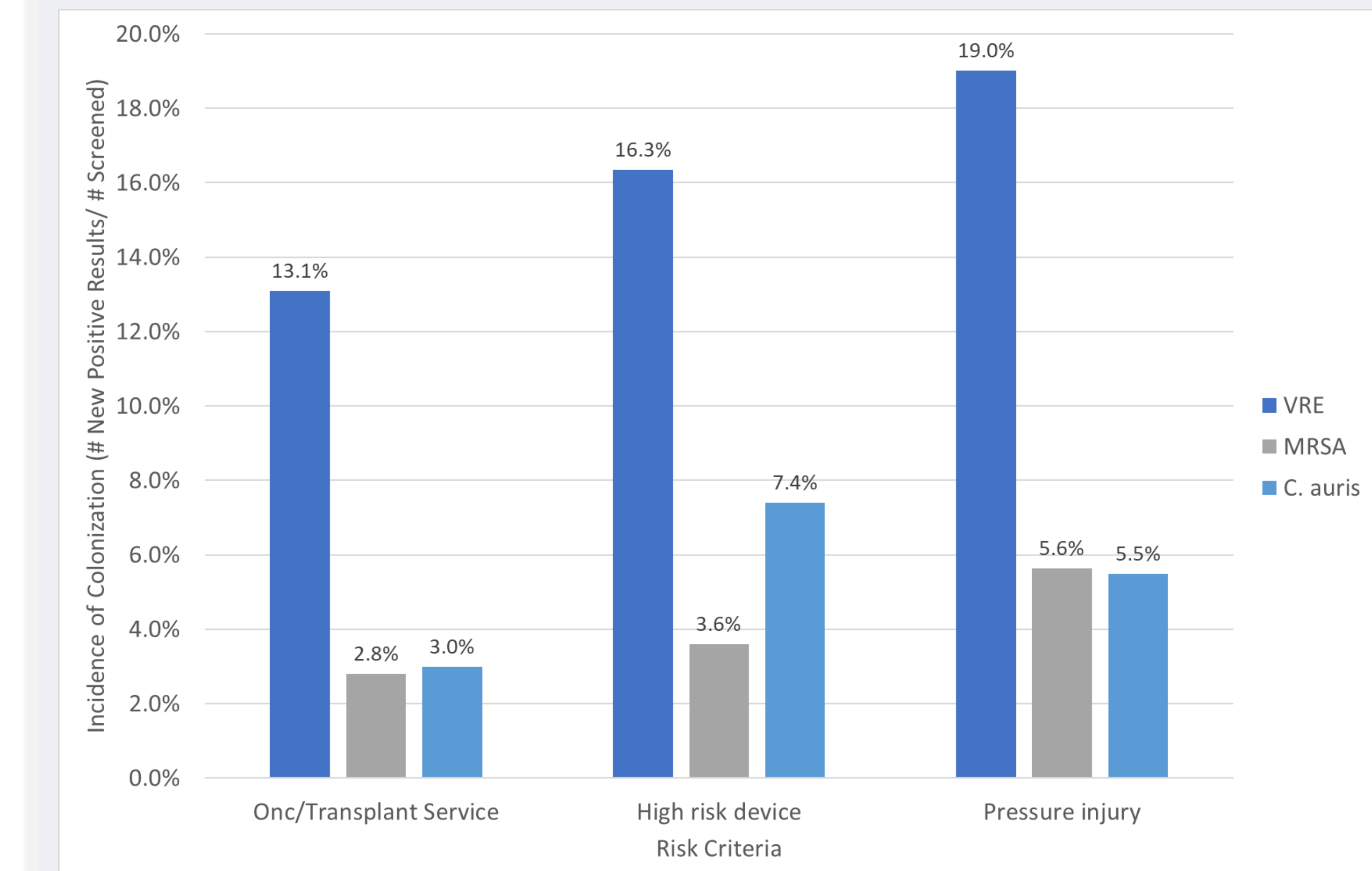
Data Analysis

To monitor the implementation of the revised MDRO Admission Screening Policy chart reviews were conducted for every newly admitted patient to determine eligibility of screening. Medical teams were notified if a patient met criteria for screening but were missing orders. The following data elements were calculated:

- Percent positivity of colonization with MRSA, VRE, and *C. auris* for newly admitted patients
- Incidence of colonization with MRSA, VRE, and *C. auris* with each eligibility criterion
- Percent Compliance with the revised MDRO Admission Screening Policy (policy compliant: screening orders placed within first 3 days of admission)

Results, cont.

Incidence of Colonization Based on Screening Criterion



Of patients admitting to an oncology or transplant hospital service, 13.1% had a positive VRE result, 2.8% had a positive MRSA result, and 3% had a positive *C. auris* result. Of patients admitting with a high-risk device, 16.3% had a positive VRE result, 3.6% had a positive MRSA result, and 7.4% had a positive *C. auris* result. Of patients admitting with a stage 3, 4, or unstageable pressure injury, 19% had a positive VRE result, 5.6% had a positive MRSA result, and 5.5% had a positive *C. auris* result.

Compliance with Revised MDRO Admission Screening Policy

Overall compliance with the revised MDRO Admission Screening Policy during the study period was 96.9%.

Conclusion & Next Steps

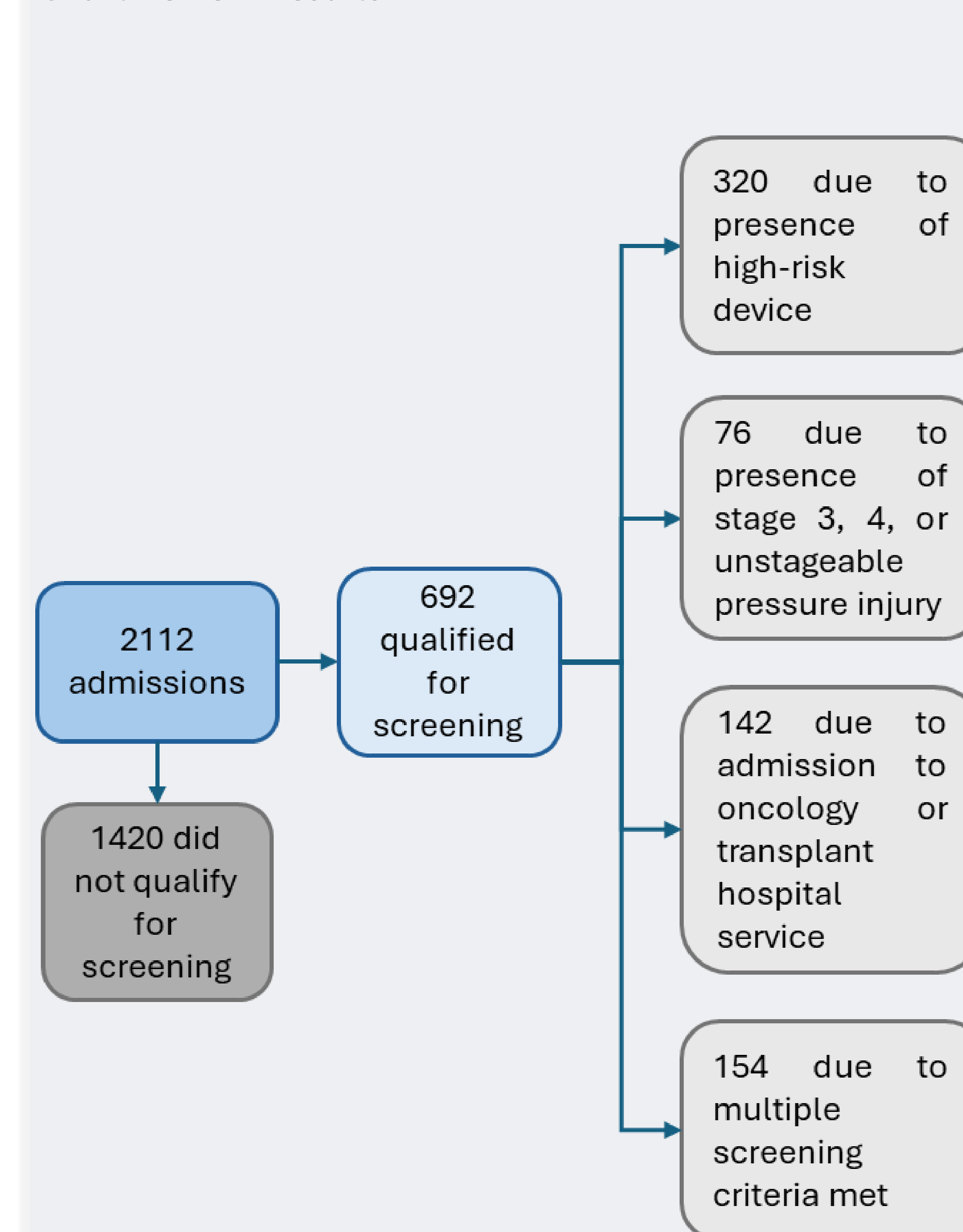
Standardizing criteria for MDRO screening along with consistent review and prompt discrepancy resolution resulted in an approximately 30% increase in program compliance. VRE positivity was highest compared to all MDROs tested and among all risk groups. The addition of *C. auris* to the policy allowed for detection of asymptotically colonized patients in need of isolation. *C. auris* positivity was highest among patients admitting with a high-risk device, consistent with public health data suggesting patients with tracheostomies are at high-risk for acquiring *C. auris*. Consistent program monitoring has been adopted into the Infection Prevention workflows to ensure sustainability of high program compliance. Robust compliance with MDRO admission screening ensures early implementation of isolation precautions for at-risk patients to prevent transmissions of MDROs between patients.

Acknowledgments

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Results

Chart Review Results



Screening Results

