

Blood Sample Rejection Rates in the Emergency Department

Background

- Laboratory blood sample rejection rate at a local emergency department during 2014 averaged 2.8%.
- National average for laboratory blood sample rejection rate ranges from 0.3% to 0.8% (Shahangian & Snyder, 2009).

Question

How can the emergency department reduce its blood specimen rejection rate?



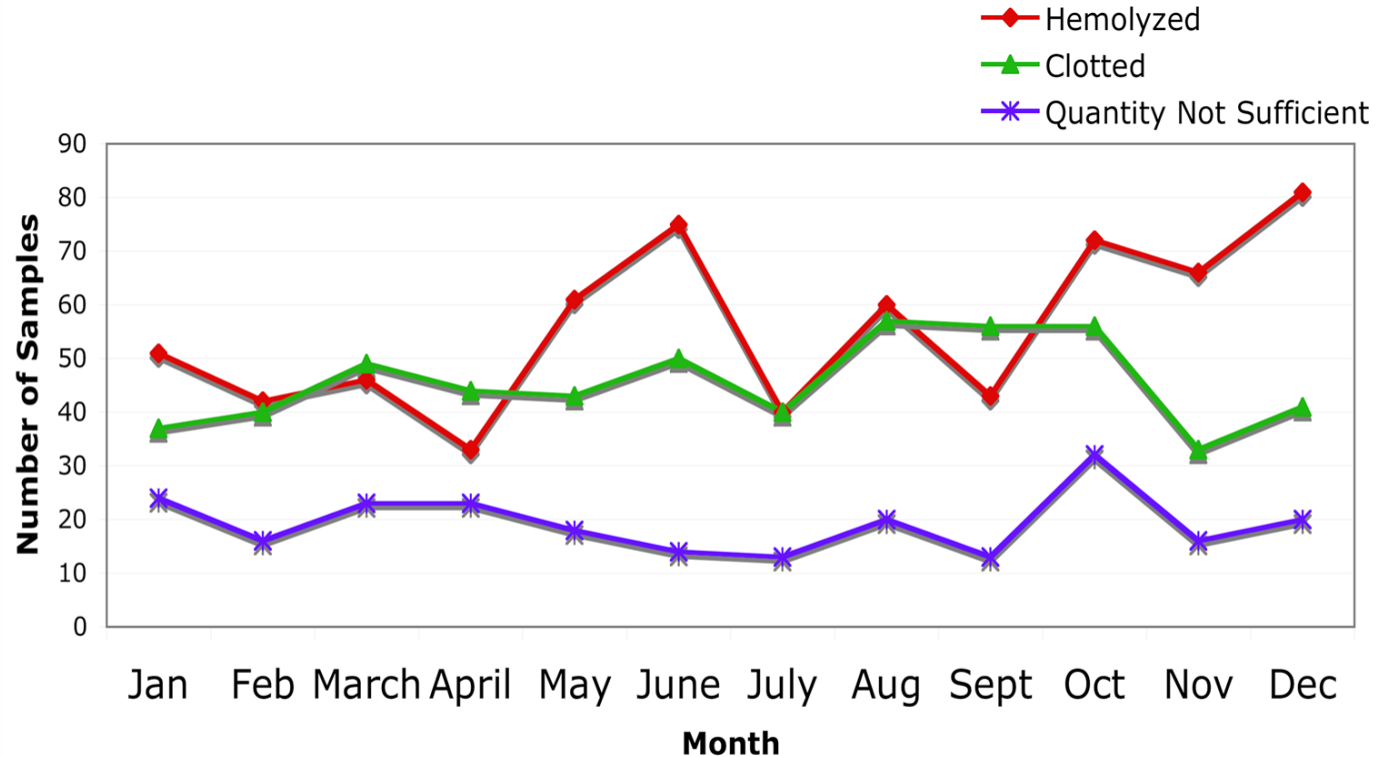
Objectives

- Explore best practice methods to improve blood sample collection.
- Discover why laboratory is rejecting blood samples.
- Determine personnel population with highest rate of rejections.

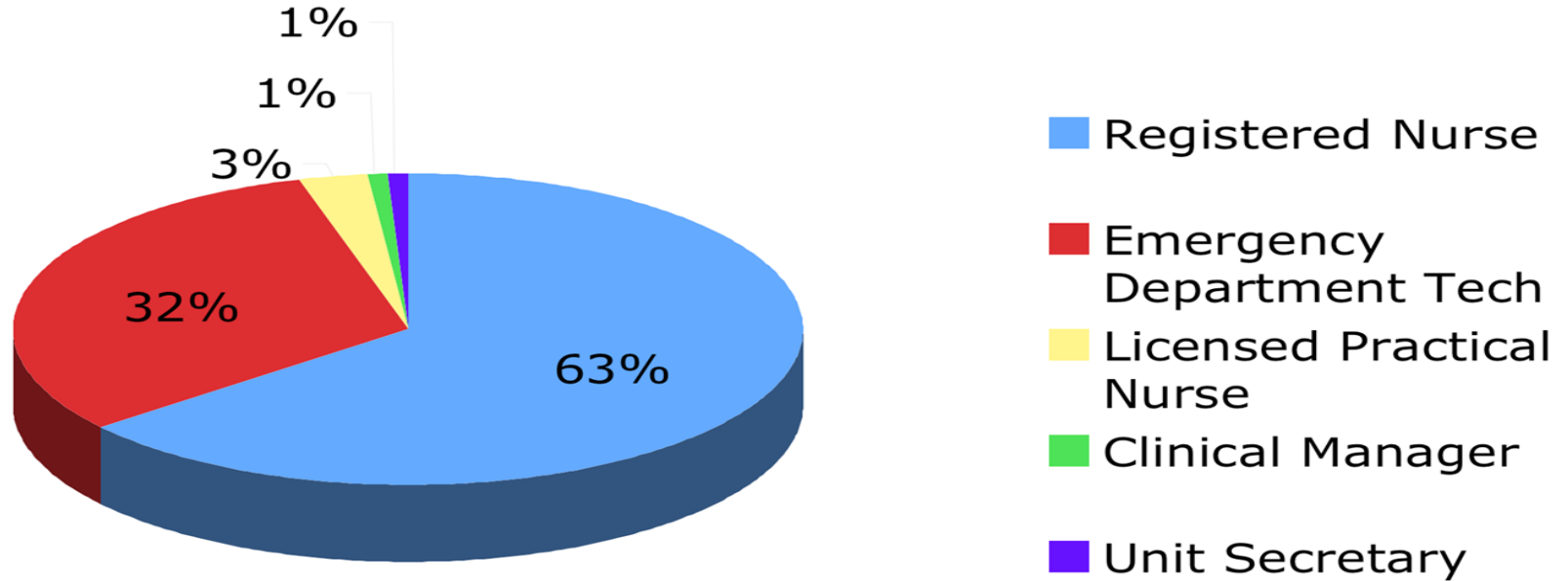
Methodology

- Use laboratory data and narrative interviews to analyze most common reasons for rejection.
- Cross-reference laboratory data with employee list to determine personnel with highest rates of lab rejection.
- Review literature to determine best practices for blood sample collection.

Laboratory Rejection Rates 2014



Laboratory Rejections by Personnel



Results

- Hemolysis and clotting are main reasons for laboratory rejection.
- Registered nurses are dominant group of personnel with laboratory rejections.
- Hemolysis is lower in blood samples drawn through butterfly needles as opposed to intravenous catheter (IV) starts (Wollowitz et al., 2013).
- Use of ED techs or a dedicated phlebotomist in lieu of nurses decreases blood sample rejections (Lowe et al., 2008).

Discussion

- Study effectively identified common lab rejection errors and probable reasons for errors.
- Tendency to draw blood samples when starting IVs may account for registered nurses' higher rejection rate.
- Reducing laboratory rejection rate is particularly important in the emergency department, where every second counts.
- Laboratory rejections also increase healthcare costs and decrease patient satisfaction (Kaushik & Green, 2014).

Recommendations

- Revise policy to prohibit drawing blood from IV starts.
- Educate staff annually on best practice for decreasing blood sample rejections.
- Explore feasibility of using a dedicated phlebotomist or ED technicians to draw blood samples instead of nurses.

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