Time Out: Introducing Peri-procedural Checklists to Reduce Mislabeled Specimens

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Introduction

- Resident-run minor surgery clinics increase operative autonomy for trainees and deliver high-quality patient care [1]
- There were **47 mislabeled specimens** at San Diego VAMC from May 2025-Nov 2025, **at least 3** from General Surgery Minor Procedures clinic
- Root-cause analysis identified lack of standardized clinic processes as source of errors

SMART Aim:

We aim to standardize the General Surgery Minor Procedures Clinic process by implementing pre- and post-operative checklists, including a double verification of accurate specimen labeling, with the goal of residents self-reporting 75% compliance with the new process over 4 months

Methods

- Gemba walk and lean theory identified **muri**, or overburden, as source of error (see Fig 1)
- Pre- and post-operative checklists created, modeled on OR pre-operative huddle and post-operative debrief
- Double verification process piloted for accurate specimen labeling
- **Process measure**: procedure note redesigned for residents to self-report checklist use and double verification of specimens
- **Outcome measure**: monthly reports from Risk Management on mislabeled specimens from General Surgery Minor Procedures Clinic
- **Balancing measure**: interns completed system usability scale (SUS) surveys to evaluate checklists' ease-of-use [2]

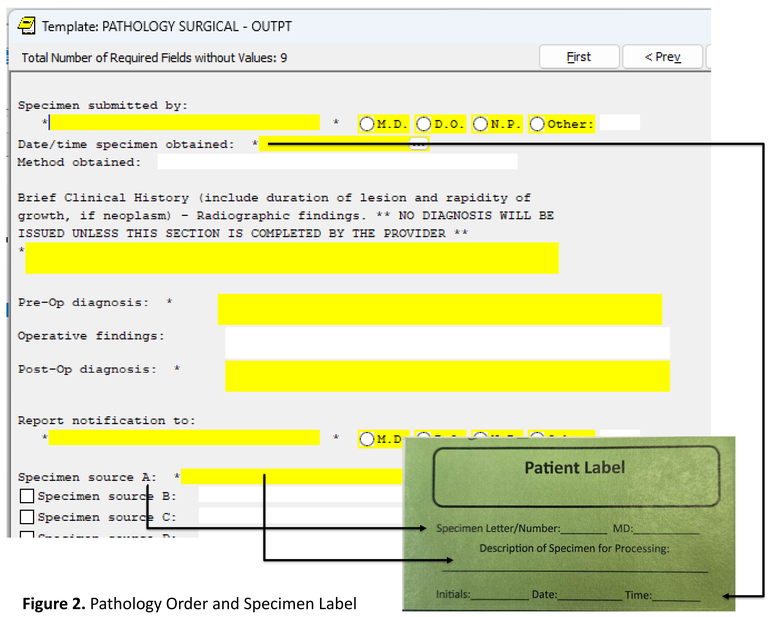

Figure 2. Pathology Order and Specimen Label

Results

- Jan 2026-Apr 2026, there were **86** procedures with specimens collected
- Checklists and double verification of specimen labeling was self-reported in **81%** of procedures (**70/86**)
- There were **2** reported mislabeled lab specimens (see Table 1)
- SUS surveys of **5** interns reported an average score of **98.5 out of 100**
- Interns new to the rotation reported checklists improved organization

Action	Date	Lessons Learned
Gather baseline data	Nov 2025	Low frequency, high-impact event that stops workflow
Pilot surgical checklists	Nov 2025	Some steps rearranged to match clinic flow
Track compliance via procedure notes	Jan 2025	Frequent coverage in clinic by senior residents reduces reported compliance
Monthly follow up with Risk Management	Jan 2025	2 new cases of mislabeled specimens (1 date, 1 cup letter)
Perform SUS surveys	Jan 2025	Additional areas of concern identified by interns (malfunctioning instruments, documentation)

Table 1. PDSA Cycles of Checklist Implementation

Conclusion

- Pre- and post-operative checklists were easy to use and standardized clinic processes for overburdened interns
- Achieved goal of >75% self-reported compliance with new process
- Mislabeled specimens during the implementation period have identified areas for further education

Next Steps

- Aim to have more surgical specialty clinics adopt similar checklists for sterile procedures
- Further adaptation needed for implementation throughout SDVAMC
- Identified more sources of muri to reduce in clinic (e.g. documentation)

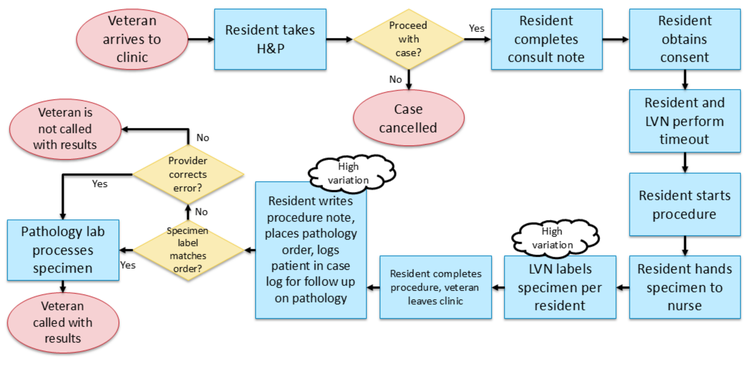

Figure 1. Current Process Map of General Surgery Minor Procedures Clinic

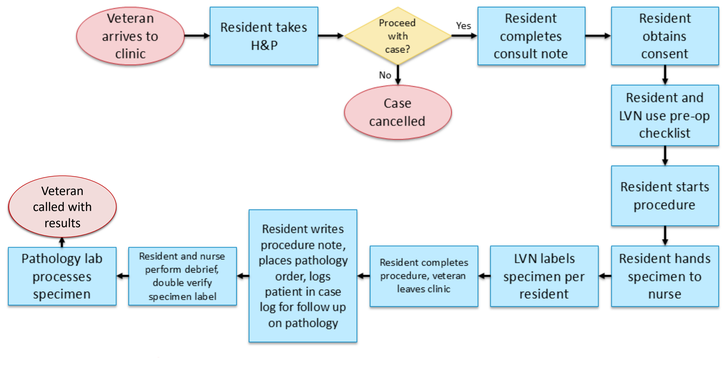

Figure 3. Target Process Map of General Surgery Minor Procedures Clinic

References

[1] B. M. Wojcik et al, "The resident-run minor surgery clinic: a four-year analysis of patient outcomes, satisfaction, and resident education," in Journal of Surgical Education, Nov-Dec 2021; 78(6): 1838-50.

[2] J. Brooke, "SUS – a quick and dirty usability scale," Redhatch Consulting Ltd, Nov 1995.

[3] Haynes et al, "A surgical safety checklist to reduce morbidity and mortality in a global population," in NEJM, Jan 2009; 360: 491-9.