Improving Lesion Diameter Reporting on Skin Biopsy Requisition Forms: A Quality Improvement Project

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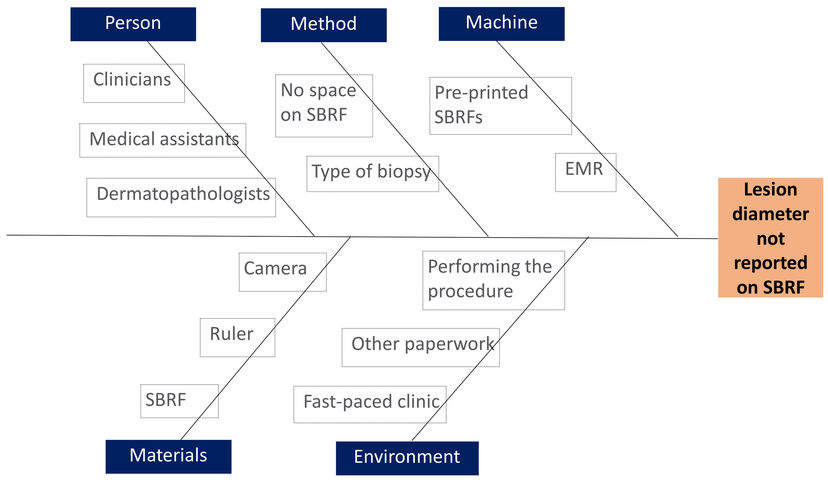
BACKGROUND

- Skin biopsy requisition forms (SBRFs) are the primary communication tool from dermatologists to dermatopathologists. SBRFs are completed by the clinician and included to provide relevant demographic and clinical information not otherwise obtainable from examining the specimen grossly or microscopically.[1]
- Multiple societies and guidelines recommend including clinical diameter on SBRFs. A survey of dermatologists showed lesion size as important to include on SBRFs.[2] Members of the American Society of Dermatopathology recommend describing clinical morphology, including size, on SBRFs.[3] The National Comprehensive Cancer Network recommends including diameter on SBRFs when obtaining a biopsy of suspected basal cell carcinoma.[4] Despite these recommendations, one study showed that lesion size was only provided in 22% of biopsied melanocytic lesions.[5]
- Inconsistent reporting of lesion diameter on SBRFs may limit the consulting dermatopathologist's ability to provide an accurate diagnosis or further management recommendations.[1]

OBJECTIVE

The primary aim of our quality improvement (QI) project was to increase the rate of reporting diameters of neoplasms on SBRFs from an academic dermatology outpatient clinic to greater than 65% within three years to align our practice with guidelines in dermatology and dermatopathology.[3] This was achieved by employing the Plan-Do-Study-Act (PDSA) model to educate dermatology residents on the value of lesion size in SBRF reporting, enlist visual cues to reinforce adherence, and evaluate reporting rates following each intervention.[6]

METHODS



METHODS (cont.)

PDSA-1
- July 1, 2021 to February 4, 2022
- Audited initial lesion diameter reporting rate by retrospectively evaluating SBRFs

PDSA-2
- February 5, 2022 to June 14, 2022
- Reviewed and discussed evidence-based guidelines for SBRF lesion diameter reporting

PDSA-3
- March 28, 2023 to June 30, 2023
- Physical stamp containing the text "Lesion diameter: ___ cm" was applied to select SBRFs

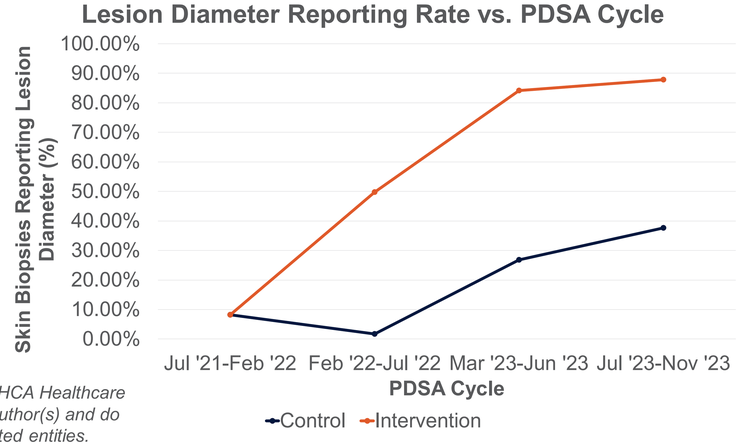
PDSA-4
- July 1, 2023 to November 30, 2023
- Conducted peer orientation with above interventions for new resident entering cohort

OUTCOMES

Lesion Diameter Reporting Rate

	PDSA-1	PDSA-2	PDSA-3	PDSA-4
Total skin biopsies	839	567	429	680
Total skin biopsies included in analysis	594	460	354	502
Intervention group reporting rate	-	49.71% (85/171)	84.13% (53/63)	87.78% (79/90)
Control group reporting rate	8.25% (49/594)	1.73% (5/289)	26.80% (78/291)	37.62% (155/412)
p-value compared to PDSA Cycle 1	-	p < 0.001	p < 0.001	p < 0.001
p-value compared to control group	-	p < 0.001	p < 0.001	p < 0.001

Lesion Diameter Reporting Rate vs. PDSA Cycle



CONCLUSION

- Our QI project resulted in an improved and sustained lesion diameter reporting rate.
  - Barriers to implementing guidelines were addressed, including lack of awareness, inertia of previous practice, and external barriers (eg, lack of a reminder system).[7]
  - A peer orientation successfully educated a new resident in implementing lesion diameter reporting in his practice.[8]
- Several limitations were encountered in this QI project.
  - Lesions may not have been classified correctly during data collection, as the determination of a neoplasm vs. eruption was made from the clinical impressions recorded on SBRFs by a single dermatology resident.
  - There was limited, but some, crossover between the control and intervention groups secondary to scheduling of staff. This may have resulted in the miscategorization of some data.
  - In retrospective chart reviews, missing data can result in a hidden or non-response bias in the results. As some SBRFs were not accessible, the data set is incomplete.
- Future directions of this project may include:
  - Examining the downstream effect from SBRFs received by dermatopathologists including lesion diameter vs. non-inclusion.
    - In one study, 90% of dermatopathologists viewed medical decision-making guidance as part of their role in addition to providing pertinent histopathologic findings and specific diagnoses.[9]
    - Inclusion of detailed information in SBRFs improves diagnostic accuracy of the consulted dermatopathologist.[10,11]
  - Examining the impact of the electronic medical record (EMR).[1]
    - The use of clinicians' EMRs by pathologists may enhance access to clinical information not otherwise included on the SBRF.
    - Some authors have proposed a modified SBRF that includes lesion size.[5] However, SBRFs are increasingly generated by EMRs, resulting in incomplete SBRFs that omit vital clinical information (eg, lesion size) for interpreting dermatopathologists.

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