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Impact of Dermoscopy Training for PCPs on NNB to Detect Melanoma

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Introduction

Primary care providers (PCPs) play a critical role in skin cancer detection. Dermoscopy improves the user's ability to differentiate benign melanocytic nevi from melanoma. A needs assessment at our institution found fewer than 10% of PCPs were trained to use dermoscopy. To address this training gap, a multimodal dermoscopy curriculum was created, implemented, and disseminated across our health system. 267 (of 412) PCPs were trained. The curriculum included:

- Hands-on 90-minute dermoscopy workshop (15 completed)
- Monthly 60-minute tele-mentoring dermoscopy sessions using Extension for Community Health Outcomes (ECHO)

The goal of this project was to analyze the impact of dermoscopy training on the number of melanocytic nevi needed to biopsy (NNB) to detect a melanoma in the primary care setting.

Methodology

Biopsy data extracted from electronic medical record using Epic BI Portal to filter time frame and provider specialty. *Inclusion Criteria:* Performed by MaineHealth PCP between 11/05/2013-11/06/2021. *Exclusion Criteria:* Performed by dermatologist or surgeon

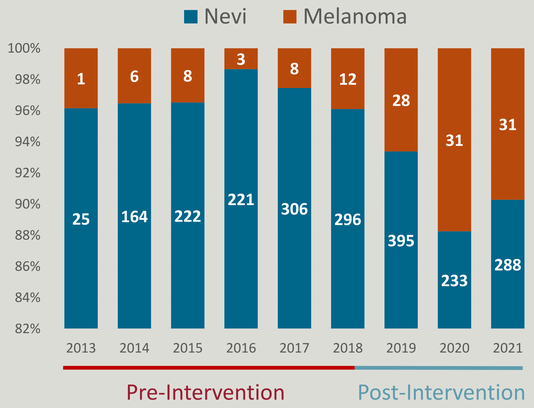
Manual Review of Pathology Reports Categorized by pathologic diagnosis. Inclusion criteria: melanocytic growth

Data Analysis Data stored in REDCap Database. NNB calculated in R (Version 3.6.2)

Results

	Nevi	Melanoma	NNB
Pre-Intervention	1200	36	**34.3**
Post-Intervention	950	92	**11.3**

Figure 1. Relative percent of melanomas detected per year with melanoma and nevi count listed respectively



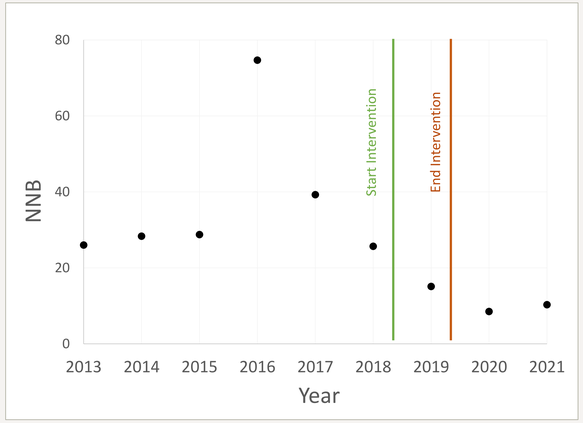
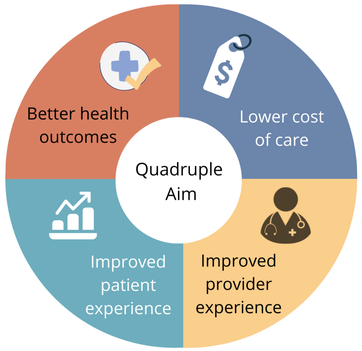


Figure 2. Average NNB per year with dermoscopy training intervention start and end date indicated

Conclusions

- Following dermoscopy training there were meaningful reductions in NNB to detect a melanoma in the primary care setting
- Dermoscopy training for PCPs hits on all aspects of the quadruple aim: improves diagnostic accuracy, reduces cost per melanoma diagnosed and fosters provider engagement.



Next Steps

- Reduce barriers to dermoscopy use and training in primary care setting
- Cohort sub-analysis of PCPs trained vs untrained
- Recognize the risk of skin cancer overdiagnosis and focus on optimizing dermoscopy to improve quality and diagnostic accuracy