



# Time-Driven Activity-Based Costing for Wide Local Excisions of Thin Melanomas

Clarissa M. Bielema, Kelly M. McMasters, M.D., Ph.D, Charles R. Scoggins, M.D., MBA, Jason W. Smith, M.D., Ph.D, MBA, Michael E. Egger, M.D., MPH  
Department of Surgery  
University of Louisville School of Medicine

## Introduction

Time-Driven Activity-based costing is a more accurate means of determining the true cost of health care services compared to typical accounting methods, by taking into account the cost of each healthcare worker's time spent caring for the patient.

## Objectives

- Develop process maps for the removal of thin melanomas with wide local excision (WLE).
- Determine time spent by personnel providing patient care during preoperative, intraoperative, and postoperative segments of the surgical procedure.

## Methods

Three process maps were constructed for the preoperative (Figure 1), intraoperative (Figure 2) and postoperative (Figure 3) segments of the procedure. Each segment was observed and timed, accounting for each medical professional's role in the procedure. Mean times and standard deviations were calculated for all processes and segments of the procedure.

## Acknowledgements

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## Results

Figure 1. Preoperative process map for WLE of Thin Melanomas.

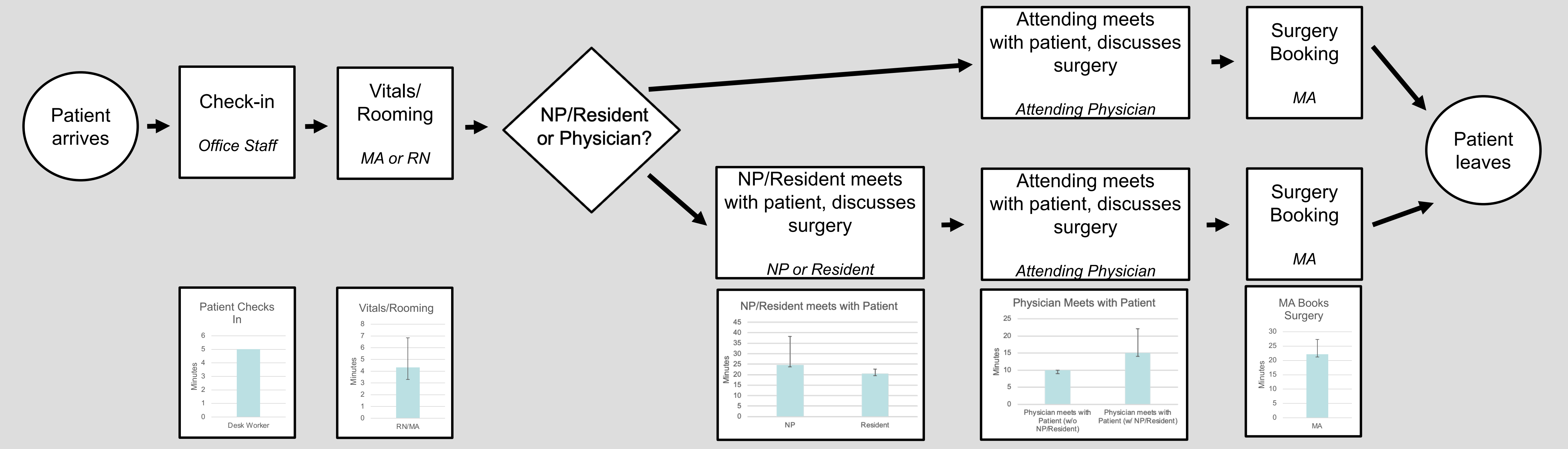


Figure 2. Intraoperative process map for WLE of Thin Melanomas.

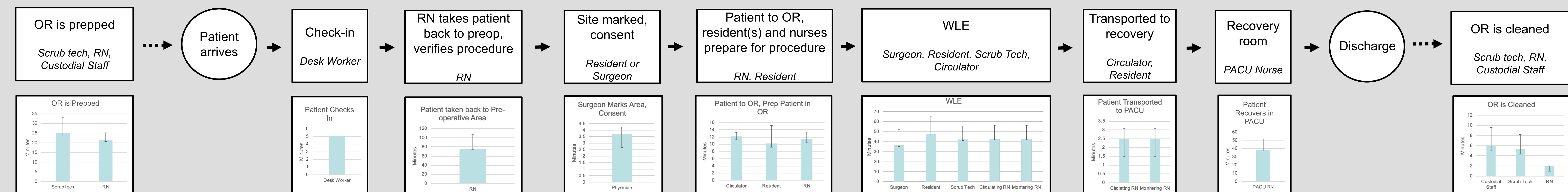
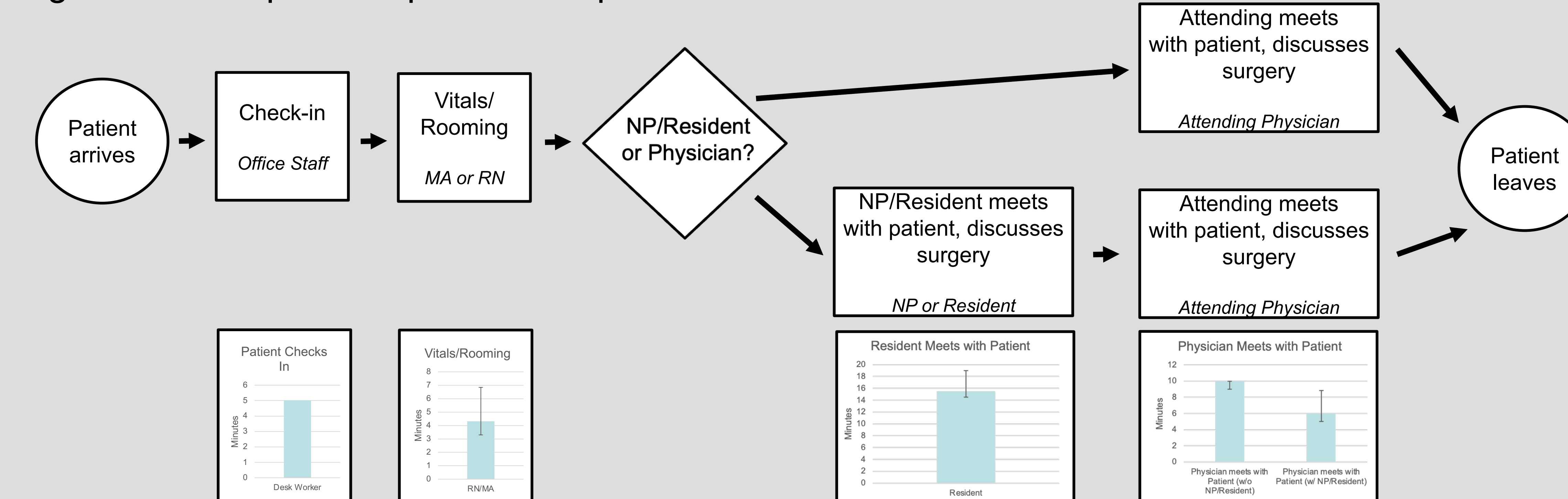


Figure 3. Postoperative process map for WLE of Thin Melanomas.



## Conclusions

On average, patients spent 52 minutes during the preoperative segment, 176 minutes during the intraoperative segment and 23 minutes during the postoperative segment. The highest standard deviations were found for processes in the operative segment-- RN takes patient back to preop, verifies procedure (Mean = 75, SD = 32 minutes), WLE-Resident (Mean = 48, SD = 18 minutes) and WLE-Surgeon (Mean= 36, SD =16 minutes).

## Future Directions

Moving forward, salary information will be collected and applied to the data to calculate the exact cost of each surgical team member's contribution to the WLE of thin melanomas. Once the total costs are calculated, including personnel and equipment, the resulting value will be compared to the current amount billed for the procedure. Eventually, this data will be used to determine cost-saving measures based on the determined true cost drivers of the procedure.