

# Picture This! A HAPI Reduction!

OhioHealth Riverside Methodist Hospital

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# Picture This! A HAPI Reduction

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## BACKGROUND

HAPIs affect up to three-million patients a year within the United States healthcare system. HAPIs have the potential of an increased risk for patients including a higher rate of mortality and decreased quality of life (Wassel et al., 2020).

We evaluated our PSI – 3 metric and our HAPIs per 1,000 patient days metric and determined that we had an opportunity for improvement particularly with our five Critical Care Units with the greatest number of HAPIs.

## BASELINE DATA

OhioHealth monitors the PSI-3 metric which is the rate of stage 3, stage 4 and unstageable pressure injuries. Our target goal for the Observed : Expected ratio is less than 1.0 and, at the start of our work, our fiscal year 2023 showed an O:E of 2.32 with 52 stage 3, 4 and unstageable pressure injuries.

## INTERVENTION

Our intervention is the implementation of a “skin-care bundle” that includes:

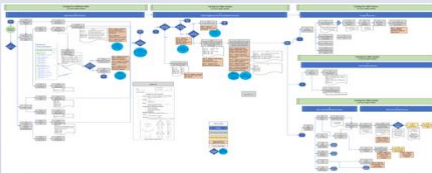
- 1) Performing a 4 Eyes Skin Assessment On Admission and On Transfer
- 2) Using our EMR's mobile device (Rover) to pictorially capture any skin-oriented conditions identified during the assessments.
- 3) Appropriately consulting our Wound Care Team



## ANALYSIS

To better understand our opportunities, a work team produced the following flow diagram. We documented six high-level processes and any opportunities for improvement (orange boxes) in each process.

- Skin Assessment Process
- Initial Staging and Documentation Processes
- Consult Process
- Care Delivery Process
- Skin Issue Notification Process
- Skin Issue Review Process



## RESULTS

For our intervention we monitored both the HAPIs per 1,000 patient days for each pilot unit and, from an overall hospital perspective, we continued to monitor the PSI-3 metric.

The Intervention results, for all five units, showed a 37% drop in HAPIs in the six-month period immediately post implementation and continued to show a 30% drop 12 months post, 28.4 to 20.0.

The PSI-3 metric dropped 29% from FY23, at 2.32 to FY24 at 1.64 and it continues to decline in FY25 which is at 1.47. We've dropped from 52 PSI-3 injuries to 30.

Unit	Baseline (FY23)	Interventive (FY24)	Annual Performance (FY25)
ICU-1	1.12	0.71	0.71
ICU-2	0.95	0.52	0.52
ICU-3	1.07	0.69	0.69
ICU-4	0.40	0.26	0.26
ICU-5	0.06	0.00	0.00
<b>Total</b>	<b>38.4</b>	<b>24.8</b>	<b>20.0</b>

## LATERALIZATION

Our phase II units, general medicine and intermediate units, showed a baseline of 7.04 HAPIs per 1,000 patient days and were able to reduce this to 4.75 and then to a 2.91, a 59% drop in HAPIs.

## DISCUSSION

This improvement resulted in:

- 1) better capture of POA conditions;
- 2) early application of preventative care and treatments resulting in healed patients;
- 3) better HAPI attribution for targeted action;
- 4) timely and appropriate consults to our WOC team; and
- 5) a reduction in skin related complaints

## ACKNOWLEDGEMENTS

Thank you to all the RMH nursing units who implemented the 4 eyes assessment, picture taking using the Rover, and ensuring appropriate consults and care delivered to our patients.

## REFERENCES

Medline skin health. (2021). Pressure injury staging is as easy as Apple Pie. Retrieved from <https://www.medline.com/wp-content/uploads/2019/05/Pressure-Injury-Explanation-Poster.pdf>

Wassel, C. L., Delhougne, G., Gayle, J. A., Dreyfus, J., & Larson, B. (2020). Risk of readmissions, mortality, and hospital-acquired conditions across hospital-acquired pressure injury stages in a national hospital discharge database. *International Wound Journal*, 17(6), 1924–1934. <https://doi.org/10.1111/iwj.13482>

# BACKGROUND

HAPIs affect up to three-million patients a year within the United States healthcare system. HAPIs have the potential of an increased risk for patients including a higher rate of mortality and decreased quality of life (Wassel et al., 2020).

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# BASELINE DATA

## The Metric; PSI - 3

- Stage 3, Stage 4, and Unstageable Hospital Acquired Pressure Injuries

## The Opportunity – FYE23

- Poor PSI-3 Metric Performance
  - Target < 1.0
  - Actual O:E Rate = 2.32
  - Actual PSI-3 Count = 52
- Poor PSI-3 Cohort Performance
  - Target = Top Decile; 1-10 %tile
  - Actual = 91<sup>st</sup> Percentile

PSI-3 Metric: Stage 3, 4, & Unstageable	
Years / Months	FYE23
O:E	2.32
Actual Count	52

PSI-3 (Vizient) Stage 3, 4, & Unstageable Cohort Performance	
Time Period	FY23 Jul - Jun
Position In Cohort	155/171
Percentile	91 %tile
<i>Target = top decile performance = 1 - 10 %tile</i>	

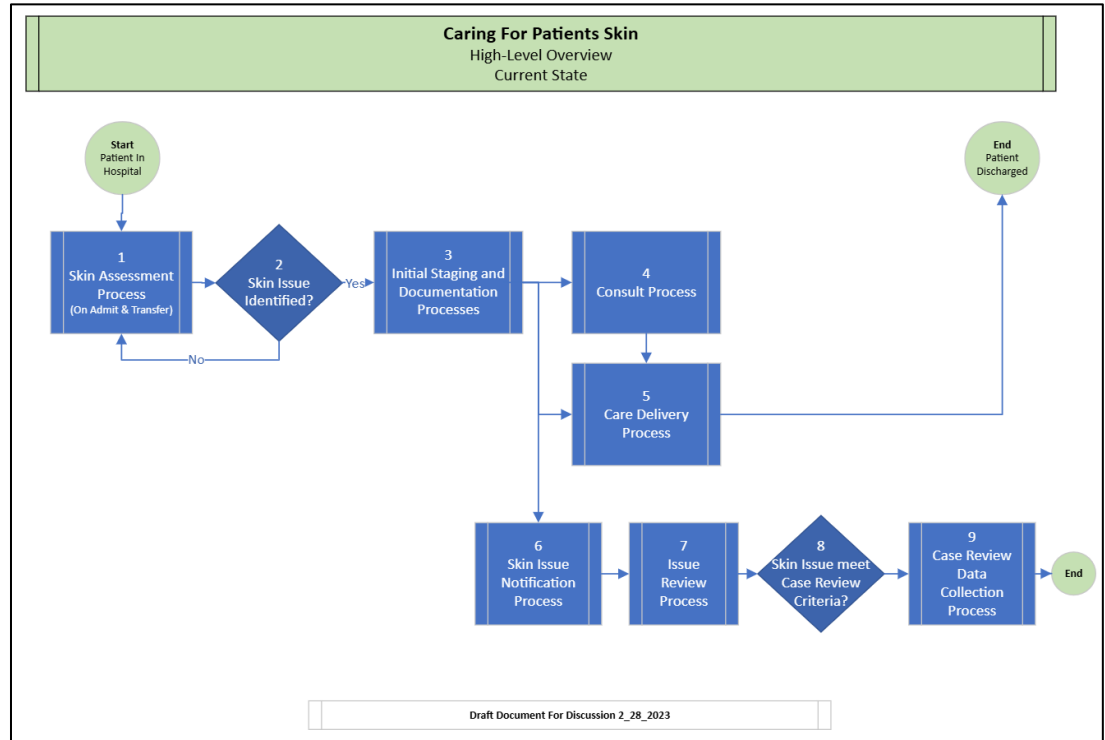
# ANALYSIS

## High-Level Process Flow

February 2023

### Created Current State Process Maps

1. Skin Assessment
3. Initial Staging and Documentation
4. Consults
5. Care Delivery
6. Skin Issue Notification
7. Skin Issue Review
9. Case Review



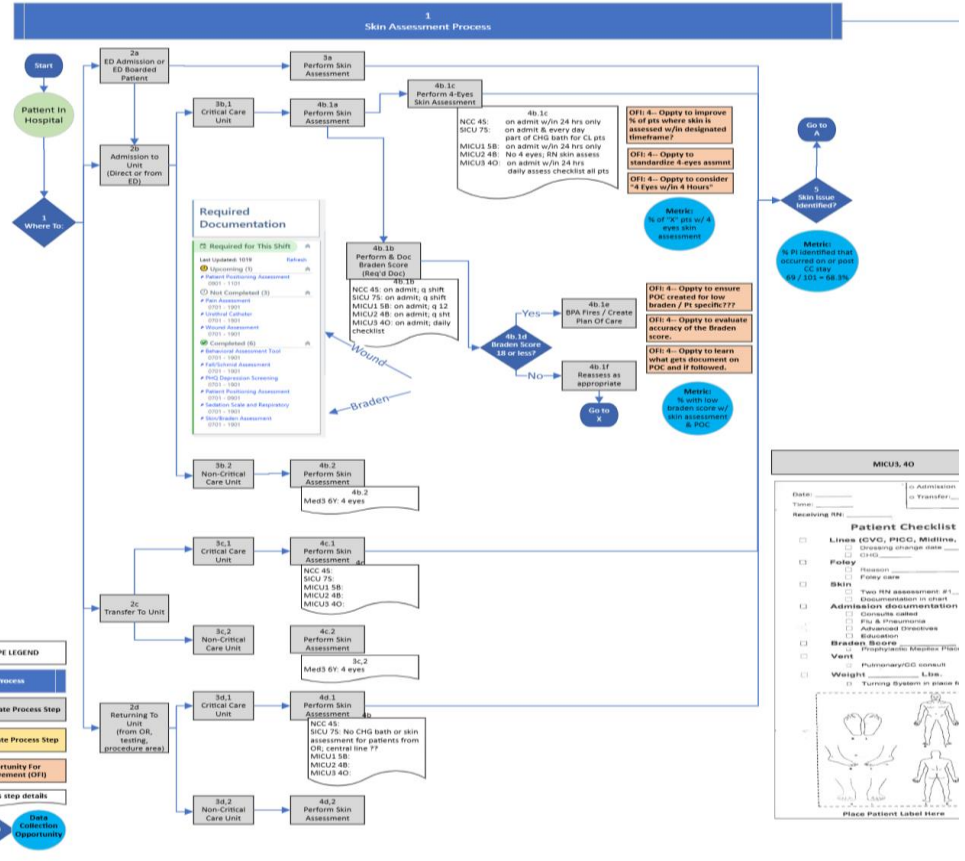
# Skin Assessment

## Current State

### 1. Opportunities to:

- Improve % of patients where skin is assessed and w/in a designated timeframe.
- Standardize on 4 eyes assessment
- Ensure patient specific POC created for patients with low Braden scores
- Evaluate accuracy of Braden Score

Orange Boxes = Opportunity For Improvement (OFI)



# Staging & Documentation

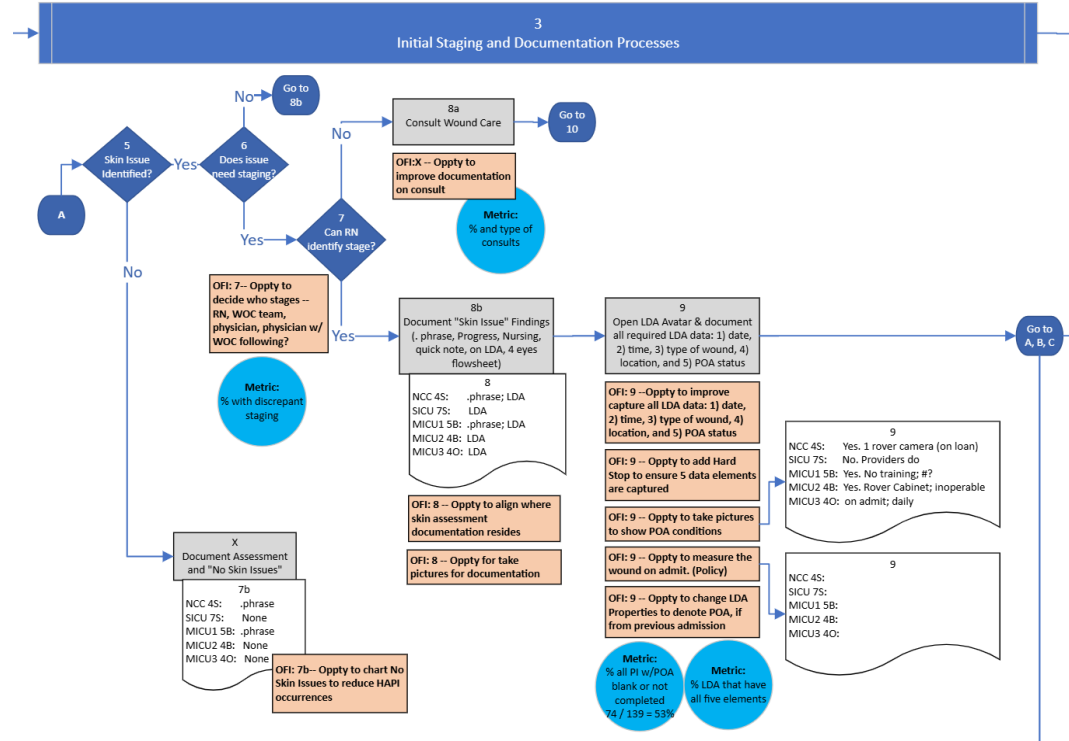
## Current State

### 3. Opportunities To:

- Decide who stages identified skin issues
- Chart No Skin Issues to reduce HAPI occurrences
- Improve the quality of the WOC consult
- Align where skin assessment documentation resides (quick note vs. flowsheet)
- Improve LDA completion – date, time, type, location, and POA
- Utilize Rovers to take pictures of all skin issues identified
- Align provider and wound care documentation

Orange Boxes =

Opportunity For Improvement (OFI)



# WOC Consults and Care Delivery

## Current State

### 4. WOC Consults: Opportunities To:

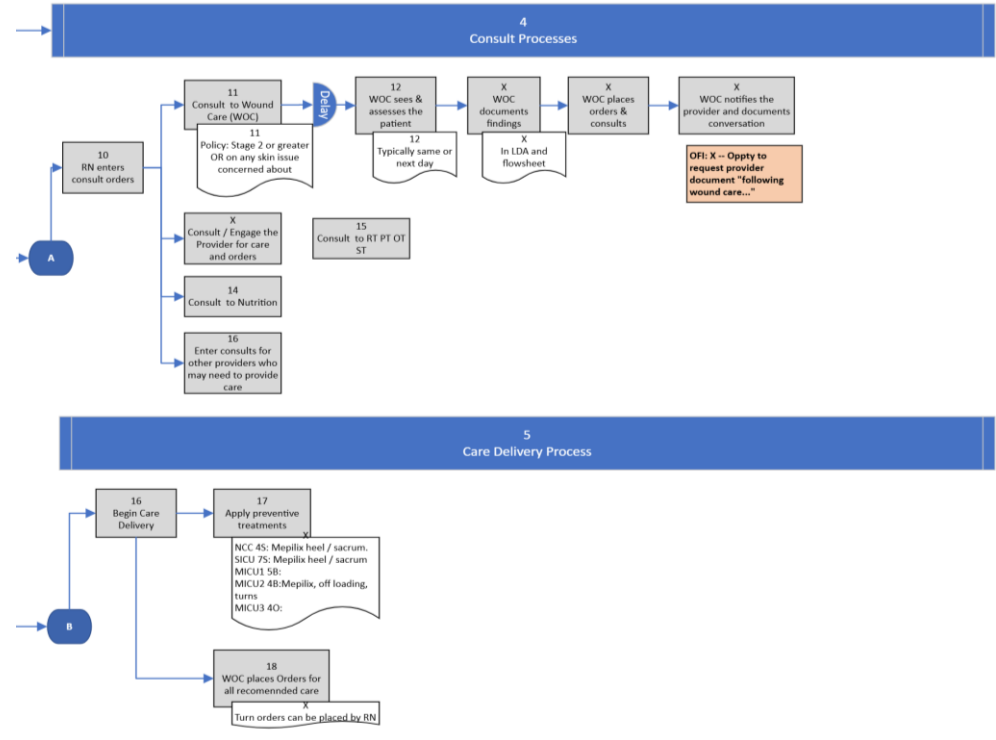
- Improve the quality / descriptions in the wound care consult
- Have providers denote “following wound care...”

### 5. Care Delivery: Opportunities To:

- Educate on best practices for prevention and treatment
- Ensure patients are appropriately turned

Orange Boxes =

Opportunity For Improvement (OFI)





# INTERVENTION

Our intervention is the implementation of a “*skin-care bundle*” that includes:

- 1) Performing a 4 Eyes Skin Assessment On Admission and On Transfer
- 2) Using our EMR's mobile device (Rover) to pictorially capture any skin-oriented conditions identified during the assessments.
- 3) Appropriately consulting our Wound Care Team



## We call it our Rover Pilot

# The Rover Pilot

## Pilot Goals & Metrics

- Complete a 4 Eyes Assessment
- Take Pictures With The Rover
- Order, as appropriate, Wound Consults

	Pilot Tasks	4 Eyes Assessment Completed		Rover Pictures Taken		Wound Consults Ordered	
		#	%	#	%	#	%
	<b>Units</b>						
Pilot Units	<b>Unit 1</b> 07/05/2023	33/42	79%	18/18	100%	18/18	100%
	<b>Unit 2</b> 11/01/2023	202/227	89%	18/21	86%	NA	NA
	<b>Unit 3</b> 12/04/2023	112/112	100%	19/21	90%	NA	NA
	<b>Unit 4</b> 01/22/2024	309/385	80%	37/48	77%	41/48	85%
	<b>Unit 5</b> 02/01/2024	NA	NA	73/82	89%	NA	NA

# RESULTS

## PHASE I

Units: Critical Care Unit Focused

Metric: HAPI Rate / 1,000 Patient Days

✓ **Baseline Data**

- Six months pre implementation
- Actual: 28.4 HAPIs /1,000 Pt Days

✓ **Initial Period**

- Six months post implementation
- Actual: 17.82 HAPIs /1,000 Pt Days
- 37% reduction from baseline

✓ **Annual Performance**

- 12 months post implementation
- Actual: 20 HAPIs /1,000 Pt Days
- A 30% reduction from baseline

### Critical Care Rover Pilot Summary Results (Phase I)

Unit	Baseline	Initial Period 1-6 Months Post Implementation		Annual Performance 1 - 12 Months Post Implementation	
	HAPI Rate per 1000 Pt Days	HAPI Rate 1-6 Months	% Difference From Baseline	HAPI Rate 1-12 Months Post	% Difference From
Unit 1	4.46	2.17	<b>-51%</b>	2.42	<b>-46%</b>
Unit 2	9.50	3.12	<b>-67%</b>	2.43	<b>-74%</b>
Unit 3	5.57	3.62	<b>-35%</b>	5.16	<b>-7%</b>
Unit 4	4.43	5.02	13%	5.53	25%
Unit 5	4.44	3.89	<b>-12%</b>	4.46	0%
<b>Total</b>	<b>28.4</b>	<b>17.82</b>	<b>-37%</b>	<b>20</b>	<b>-30%</b>

\* Units sorted by go live date

\*Bolted differences are statistically significant

# LATERALIZATION

## Rover Pilot Summary Results (Phase II)

### PHASE II

Units: Intermediate CC; General Medical and Surgical

Metric: HAPI Rate / 1,000 Patient Days

#### ✓ Baseline

- Six months pre implementation
- Actual: 7.04 HAPIs /1,000 Pt Days

#### ✓ Initial Period

- Six months post implementation
- Actual: 4.75 HAPIs /1,000 Pt Days
- 33% reduction from baseline

#### ✓ Annual Performance

- 12 months post implementation
- Actual: 2.91 HAPIs / 1,000 Pt Days
- A 59% reduction from baseline

Unit	Baseline	Initial Period 1-6 Months Post Implementation		Annual Performance 1 - 12 Months Post Implementation		Notes
	HAPI Rate per 1000 Pt Days	HAPI Rate 1-6 Months Post	% Difference From	HAPI Rate 1-12 Months	% Difference From	
Unit 6	0.53	0.00	-100%	0.57	8%	12 months post
Unit 7	1.29	1.66	29%	0.91	-29%	11 months post
Unit 8	0.77	0.74	-4%	1.11	44%	10 months post
Unit 9	1.06	0.37	-65%	0.54	-49%	10 months post
Unit 10	0.76	0.77	1%	0.93	22%	10 months post
Unit 11	0.67	0.21	-69%	0.25	-63%	9 months post
Unit 12	0.68	0.23	-66%	0.47	-31%	9 months post
Unit 13	1.28	0.77	-40%	0.72	-44%	8 months post
<b>Total</b>	<b>7.04</b>	<b>4.75</b>	<b>-33%</b>	<b>2.91</b>	<b>-59%</b>	

\* Units sorted by go live date

\*Bolted differences are statistically significant

# Monitoring Performance: PSI-3 Metric

## PSI-3 O:E Metric Performance

- Target < 1.0
- FY24 showed a 29% reduction from the 2.32 in FYE23
- FY25 sustained FY24 performance

## PSI-3 Metric: Stage 3, 4, & Unstageable

	FYE23	FYE24	FYE25
O:E	2.32	1.64	1.63
Actual Count : Coded	52	35	36

## PSI-3 Vizient Cohort Performance

- Target = Top Decile; 1-10 %tile
- FY24 improved to 81<sup>st</sup> percentile
- FY25 declined to 84<sup>th</sup> percentile

## PSI-3 (Vizient) Stage 3, 4, & Unstageable Cohort Performance

Time Period	FY23	FYE24	FYE25
	Jul - Jun	Jul - Jun	Jul - Jun
Position In Cohort	155/171	112/138	154/184
Percentile	91 %tile	81 %tile	84% tile

Target = top decile performance = 1 - 10 %tile

# DISCUSSION

This improvement resulted in:

- 1) Better capture of POA conditions
- 2) Early application of preventative care and treatments resulting in healed patients
- 3) Better HAPI attribution for targeted action
- 4) Timely and appropriate consults to our WOC team
- 5) A reduction in skin related complaints

# The Team!

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