

Purpose:

The development of a facility acquired pressure ulcer brings with it both a financial impact to an institution and a performance or quality of care impact that may be reportable to state or government entities.

The utilization of a Root Cause Analysis (RCA) process may help a facility gain insight into the development of a pressure ulcer through a review of the timeline of events. This process is not intended for the analysis of all facility acquired pressure ulcers but rather for review of the development of a Stage III, Stage IV or sDTI. This review may also provide gap information indicating there may have been a deviation from the facility's Pressure Ulcer Prevention and Treatment Guidelines. It may provide an opportunity for improvement in the process of the facility's skin management program. NPUAP wants to emphasize that a Root Cause Analysis (RCA) is not intended as a punitive function but rather as a learning and growth opportunity for facility staff. The facility Risk Manager should direct the storage location of this type of document.

Following the RCA Template is an Addendum 1 (page 4). This Addendum is a table that corresponds to the steps in the template process and is intended as a general guide and education tool for those unfamiliar with the RCA process. Each patient and pressure ulcer occurrence has with it a unique set of circumstances that cannot be addressed in this document. The clinician is advised to use best practice judgment during the RCA process. This tool is not intended to supersede a Root Cause Analysis form that may be current practice in a facility.

NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

STEPS	DEFINE EVENT		
1	Is this injury to the patient's skin a pressure ulcer?	YES Proceed below	NO Proceed to facility RCA guideline
2	<b>Patient Medical Record Data</b> a. Patient date of birth	XX/XX/XXXX	
	b. Patient sex	Male	Female
	c. Patient admission date	XX/XX/XXXX	
	d. Patient admitting diagnosis		
	e. Patient secondary diagnosis		
	f. Physician notified of new pressure ulcer injury(s)	YES XX/XX/XXXX 00:00	NO Add to Action Plan
	g. Physician documentation reflects notification of new pressure ulcer	YES Proceed below	NO Add to Action Plan
	h. Patient's family/POA notified and documented	YES XX/XX/XXXX 00:00	NO Add to Action Plan
3	<b>Discovery Date and Stage of Facility Acquired Pressure Ulcer</b>	XX/XX/XXXX	Stage:
4	<b>Document details of event:</b>		

NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

STEPS	INVESTIGATION		
1	<b>Which departments were connected to this event</b>		
2	<b>Were pre-admission patient conditions documented?</b> [See #2 in Reference Addendum]	YES	NO Add to Action Plan
3	<b>Was the skin assessed upon admission?</b> [See #3 in Reference Addendum]	YES	NO Add to Action Plan
4	<b>Were pressure ulcer prevention protocols implemented based on risk score or Braden Sub-Scale scores?</b> [See #4 in Reference Addendum]	YES	NO Add to Action Plan
5	<b>Was the skin assessed at least every 24 hours?</b> [See #5 in Reference Addendum]	YES	NO Add to Action Plan
6	<b>Was there a change in patient condition?</b> [See #6 in Reference Addendum]	YES	NO Add to Action Plan
7	<b>Was a Healthcare Professional/Team trained in Skin/Pressure Ulcer Prevention and Management consulted?</b> [See #7 in Reference Addendum]	YES	NO Add to Action Plan
8	<b>Was the patient placed on the correct support surface, off-loading device, and/or seat cushion?</b> [See #8 in Reference Addendum]	YES	NO Add to Action Plan
9	<b>Was the patient's nutrition status addressed?</b> [See #9 in Reference Addendum]	YES	NO Add to Action Plan
10	<b>Was the patient's mobility status addressed?</b> [See #10 in Reference Addendum]	YES	NO Add to Action Plan
11	<b>Was the Facility Acquired Pressure Ulcer properly documented?</b> [See #11 in Reference Addendum]	YES	NO Add to Action Plan

**ADDENDUM #1**

STEPS	EVENT REVIEW	CONTRIBUTING FACTOR REVIEW	POTENTIAL ACTION PLAN COMPONENTS	NOTES:
<b>1</b>	<b>Which departments were connected to this event</b>			
	<b>1A</b>	Staffing level	Was staffing level appropriate?	
	<b>1B</b>	Intra and Inter-Communication	Was there a break in communication with respect to the patient's risk for pressure ulcer development?	
	<b>1C</b>	Education / Training	Was the department staff involved educated in pressure ulcer prevention and management?	
STEPS	EVENT REVIEW	CONTRIBUTING FACTOR REVIEW	POTENTIAL ACTION PLAN COMPONENTS	NOTES:
<b>2</b>	<b>Were pre-admission patient conditions documented?</b>			
	<b>2A</b>	Medical Co-Morbidities documented placing patient at risk for pressure ulcer development	Examples: Age, Incontinence, Peripheral Vascular Disease, Sepsis, Hypotension, Multi-Organ Failure Trauma, Chronic	

NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

			inflammatory and/or catabolic state, H/O multiple episodes of acute illness, H/O of pressure ulcers, Glycemic control of Diabetes Mellitus, Body weight / malnutrition	
	<b>2B</b>	Patient Admission Transportation Source: Private Vehicle Emergency Squad / Ambulance Medical Flight	Transportation duration: 00:00	
	<b>2C</b>	Patient Initial Entry Department: Direct admission to a patient room	See #3 See#4 Time until support surface therapy initiated 00:00	
	<b>2D</b>	Patient Initial Entry Department: Emergency Department [ED]	ED Duration time: 00:00  Surface:  Repositioning documented:  Radiology/Imaging procedures:	

NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

			Type:  Duration: 00:00	
<b>STEPS</b>	<b>EVENT REVIEW</b>	<b>CONTRIBUTING FACTOR REVIEW</b>	<b>POTENTIAL ACTION PLAN COMPONENTS</b>	<b>NOTES:</b>
<b>3</b>	<b>Was the skin assessed upon admission</b>			
	<b>3A</b>	Braden, Norton, Waterlow, Braden Q, Other	Was staff educated how to properly score for a risk level?	
<b>STEPS</b>	<b>EVENT REVIEW</b>	<b>CONTRIBUTING FACTOR REVIEW</b>	<b>POTENTIAL ACTION PLAN COMPONENTS</b>	<b>NOTES:</b>
<b>4</b>	<b>Were pressure ulcer prevention protocols implemented based on risk score or Braden Sub-Scale scores?</b>			
	<b>4A</b>	Repositioning: HOB maintained at ≤30 degrees unless medically indicated otherwise?  Patient positioned at 30 degree turn angle?  Heels floated or heel off-loading devices utilized?		

NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

		<p>2 person (+) turning or device utilized to reduce shear?</p> <p>Has sacrum been protected from shear with topical product / dressing?</p> <p>Q 2hr bed turns or more frequent if clinically indicted?</p> <p>Q 1 hour chair off-loading/repositioning or more frequent if clinically indicted?</p> <p>Once position is re-aligned is mattress depressed away from patient skin surface to reduce surface friction from turning?</p> <p>Seated position places thighs at slightly less than 90-degree angle and feet in contact with floor or footstool?</p>		
--	--	--	--	--

NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

		Process for real time verification of documentation		
<b>STEPS</b>	<b>EVENT REVIEW</b>	<b>CONTRIBUTING FACTOR REVIEW</b>	<b>POTENTIAL ACTION PLAN COMPONENTS</b>	<b>NOTES:</b>
	4B	<p>Support Surface: Bed support surface clinically appropriate for patient status?</p> <p>Bed linen layer(s) kept at minimum or at manufacturers recommendation?</p> <p>Incontinence pad Fiber backed not plastic backed?</p> <p>Number of pad/linen layers under patient?</p> <p>Chair support surface clinically appropriate for patient status?</p> <p>Chair pressure reduction cushion utilized?</p> <p>Does mattress surface provide microclimate control?</p>		



NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

STEPS	EVENT REVIEW	CONTRIBUTING FACTOR REVIEW	POTENTIAL ACTION PLAN COMPONENTS	NOTES:
5	<b>Was the skin assessed at least every 24 hours</b>			
	5A	00:00 / XX/XX/XXXX of Skin Assessment prior to Event discovery		
	5B	Device related skin assessments completed at least every 24 hours		
	5C	Process for real time verification of documentation		
STEPS	EVENT REVIEW	CONTRIBUTING FACTOR REVIEW	POTENTIAL ACTION PLAN COMPONENTS	NOTES:
6	<b>Was there a change in patient condition</b>			
	6A	Hypoperfusion state: -New medication started?  Immobility due to: -Injuries limiting repositioning? -Injuries requiring surgery? -Restraints	If yes, was plan of care changed to meet higher needs  Evidence of Intra or Inter- Communication of staff  New medication start 00:00 / XX/XX/XXXX	

NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

		<p>Multi-system organ failure -New Medication(s) started?</p> <p>Change in status to Palliative Care?</p> <p>Radiology/ Imaging procedure(s) -Number of procedures? -Procedure duration?</p> <p>Refusal of care -Education provided to patient/family for best practice pressure ulcer prevention? -Repeated at each skin assessment interval? Documented?</p> <p>Surgical procedure -Number of procedures? -Pre-Operative holding time -Procedure duration? -Pressure relief options utilized? -Recovery holding time?</p>		
--	--	---	--	--

NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

		<p>-Recovery care surface clinically appropriate?                  -Repositioning options utilized?                  -Pre – operative fluids appropriate provided as clinically appropriate?                  -Post – operative warming performed in transition over time as clinically appropriate?</p> <p>Urinary Tract Infection or Urosepsis                  This clinical diagnosis may not be confirmed until 48 to 72 hours post wounding /deterioration</p> <p>Dialysis</p>		
<b>STEPS</b>	<b>EVENT REVIEW</b>	<b>CONTRIBUTING FACTOR REVIEW</b>	<b>POTENTIAL ACTION PLAN COMPONENTS</b>	<b>NOTES:</b>
<b>7</b>	<b>Was a Healthcare Professional/Team trained in Skin/Pressure Ulcer Prevention and Management consulted?</b>			

NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

	<p><b>7A</b></p>	<p>Is referral automatic for all patients?</p> <p>Is referral based on risk level; initial and ongoing with future assessments?</p> <p>Is there an evidenced based bath protocol?</p> <p>Is there an evidence based moisture skin care protocol?</p> <p>Is there an evidence based incontinence protocol?</p> <p>Is there a process for education and documentation for family/patient refusal to comply with evidence based protocol for skin and pressure ulcer prevention and management?</p> <p>Validates and updates if indicated initial skin/pressure ulcer plan of care</p>		
--	------------------	---	--	--

NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

		00:00 / XX/XX/XXXX		
STEPS	EVENT REVIEW	CONTRIBUTING FACTOR REVIEW	POTENTIAL ACTION PLAN COMPONENTS	NOTES:
8	Patient support surface, off-loading, seat cushion			
	8A	<p>Are off-loading devices readily available for staff implementation?</p> <p>Is there a process for support surface determination based on clinical patient need?</p> <p>Is there a process to monitor surface lifespan effectiveness according to manufacturer?</p> <p>Are support surfaces stored in the facility properly?</p> <p>Is there a process in place to readily obtain support surfaces, off-</p>		

NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

		loading, or seat cushions at all hours?  Has pressure redistribution layer been applied under the medical device if indicated?		
<b>STEPS</b>	<b>EVENT REVIEW</b>	<b>CONTRIBUTING FACTOR REVIEW</b>	<b>POTENTIAL ACTION PLAN COMPONENTS</b>	<b>NOTES:</b>
<b>9</b>	<b>Nutrition</b>			
		Consult requested 00:00 XX/XX/XXXX  Consult received by Nutrition Department? 00:00 XX/XX/XXXX  Diet recommendations implemented?  Accurate documentation of food intake?  Accurate documentation of supplement intake?		

NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

		<p>Are guidelines in place for enteral feeding?</p> <p>Does nutritional documentation reflect pressure ulcer prevention for patients at risk?</p>		
<b>STEPS</b>	<b>EVENT REVIEW</b>	<b>CONTRIBUTING FACTOR REVIEW</b>	<b>POTENTIAL ACTION PLAN COMPONENTS</b>	<b>NOTES:</b>
<b>10</b>	<b>Was the patient's mobility status addressed?</b>			
		<p>Was consult placed to Physical Therapy? 00:00 XX/XX/XXXX</p> <p>Consult received in Physical Therapy? 00:00 XX/XX/XXXX</p> <p>Evaluation completed? 00:00 XX/XX/XXXX</p> <p>Was consult placed to Occupational Therapy? 00:00 XX/XX/XXXX</p> <p>Consult received in Occupational Therapy? 00:00 XX/XX/XXXX</p>		

NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

		Evaluation completed? 00:00 XX/XX/XXXX		
<b>STEPS</b>	<b>EVENT REVIEW</b>	<b>CONTRIBUTING FACTOR REVIEW</b>	<b>POTENTIAL ACTION PLAN COMPONENTS</b>	<b>NOTES:</b>
<b>11</b>	<b>Was the Facility Acquired Pressure Ulcer properly documented?</b>			
	<b>11A</b>	Stage of Pressure Ulcer: Stage III Stage IV sDTI  Location: Anatomical  Is this location: Pressure over boney prominence?  Under a Medical Device?  Mucosal Ulcer under Medical Device?		



NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

		<p>Site of previously resolved pressure ulcer?</p> <p>Measurements of Pressure Ulcer:          __cmL x __cmWx __cm D</p> <p>Measurement format:          O'clock measurement format (12:00-6:00 L by 9:00-3:00 W)          or          Longest Axis measurement format</p> <p>Tunnel:          Location (s) based on clock format          Measurement (s)</p> <p>Undermining:          Location(s) based on clock format          Measurement (s)</p> <p>Description of Rim:          Open/pink          Closed/rolled          Delineated          Non-delineated</p> <p>Description of Periwound:</p>		
--	--	--	--	--

NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

		<p>Normal Fragile Soft Firm Erythematous Macerated</p> <p>Description of Wound bed tissues in %: Eschar Slough Granulation Re-epithelialized</p> <p>Pain: Yes/No Intensity based on which scale?</p> <p>Odor: Yes/No Describe:</p> <p>Exudate Type: Serous Serosanguineous Sanguineous Thin Purulent Thick Purulent</p> <p>Exudate Amount: Scant Small Moderate Large Copious</p>		
--	--	---	--	--

NPUAP PRESSURE ULCER ROOT CAUSE ANALYSIS (RCA) TEMPLATE

--	--	--	--	--

**Discussion/List of Contributing Factors**  
1.  
2.  
3.  
4.  
5.

**Action Plan**  
1.  
2.  
3.  
4.  
5.

**Facility protocol changes**  
1.  
2.  
3.  
4.  
5.

--

NOTE: Based on current reported data,

Stage I PrU likely began 12-24 hours prior

Stage II PrU likely began 24 hours prior

Stage III – IV PrU likely began at least 72 hours prior

sDTI PrU purple tissue without epidermal loss likely began 48 hours prior