



International Center for Spinal Cord Injury
at Kennedy Krieger Institute
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A Specialized Program for Prevention and Surveillance of Skin Abrasions During Aquatic Therapy for Patients with Spinal Cord Injury: A Successful Quality Assurance Initiative with Sustained Impact

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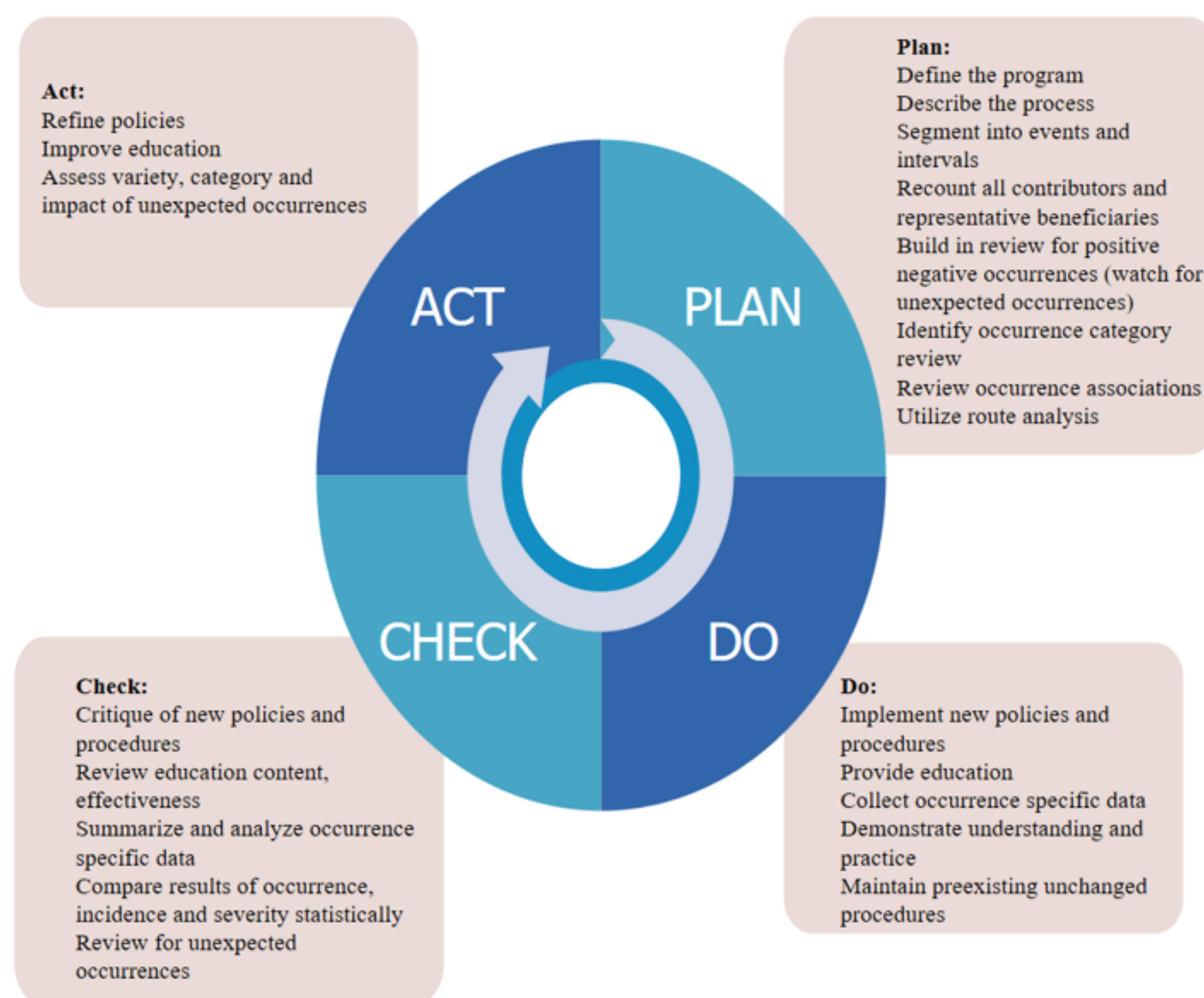


Objectives

Improve the quality of our aquatic therapy program for spinal cord injury (SCI) patients using the PDCA (Plan, Do, Check, Act) System. Our specific aim was to reduce the highest incidence of skin abrasions revealed by quality surveillance.

Design

A three-phase program was designed and implemented using the PDCA format:



Phase I: Data mining.

Phase II: Policy and procedures were written

Phase III: Education & implementation of new policies and procedures

Results

Table 1. Annual Skin Abrasion Incidence: Patient Demographics									
YEAR	2010	2011	2012	2013	2014	2015	2016	2017	2018
REPORTED ABRASIONS	3	0	3	1	1	0	4	0	0
LEVEL OF INJURY	T3 T12 T12	n/a	C6 C4,C5 C5	L2	C7	n/a	C2 T3 C5	n/a	n/a
ASIA IMPAIRMENT SCALE	C A D		B C D	D	D		Hemiplegic cerebral D D A		
COMPLETE/INCOMPLETE	1/2		0/3	0/1	0/1		2/1		
AGE: MEAN/MEDIAN	41/33		25/27	27/27	66/66		35/20		
MALE/FEMALE	1/2		3/0	1/0	1/0		2/2		
LOCATION: UE/LE	1/2		2/1	1/0	0/1		2/1		

Table 2. Aquatic Therapy (AT) and Reported Abrasions by Year										
YEAR	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
NO. OF TOTAL PATIENTS RECEIVING AT	229	240	300	293	274	276	256	252	264	1,203
NO. OF TOTAL AT APPOINTMENTS	1,552	1,562	1,769	1,719	1,668	1,597	1,597	1,635	1,540	16,084
REPORTED ABRASIONS	3	0	3	1	1	0	4	0	0	13
% OF TOTAL PATIENTS	1.31%	0%	1%	.34%	.36%	0%	1.56%	0%	0%	1.08% (avg)
% OF TOTAL APPOINTMENTS	.19%	0%	.17%	.06%	.06%	0%	.25%	0%	0%	.08% (avg)

Between 2010 to 2018: Only 1.08% of all patients (1,203) were identified as having skin abrasions acquired during aquatic therapy(AT) sessions. Of the total number of AT appointments during that same time period, the incidence of skin abrasions was even lower, at only 0.08% (16,804). During aquatic therapy sessions, patients were experiencing scrapes and abrasions predominantly affecting their limbs.

Discussion

Initial verbal reporting by therapists and nursing staff led to a paper tracking system starting in 2010. In phase II, we implemented policy and procedures outlining appropriate steps to prevent skin abrasions during AT sessions. In phase III, therapists received additional training and education to lessen potential abrasions for patients and protective foot wear became obligatory for ambulatory patients.

Conclusion

Consistent communication, reporting and tracking, combined with education and effective preventative measures dramatically lessened the incidence of skin abrasions during aquatic therapy and utilizing PDCA these outcomes can be sustained.

References

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