A Comprehensive View of an Amputee Patient – What About the Contra-lateral Limb?

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FAIRLAWN REHABILITATION HOSPITAL

Introduction

In response to interest among the interdisciplinary team to improve on the care of the amputee patient, the process for specialty certification from The Joint Commission was completed in February 2014.

Implementation

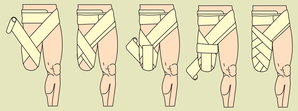
In 2013, a committee was formed to address the selection of clinical practice guidelines.

Department of Veteran Affairs/Department of Defense Clinical practice guidelines for rehabilitation of lower limb amputation were chosen along with our practice guidelines. Guidelines cited 12 key elements of focus.

Quality metrics chosen for audit purposes were: Patient satisfaction specific to amputee program, patient education of specific elements from nursing and therapy departments, FIM® score gains, and discharge to community.

Education was provided to clinical staff and included topics such as residual limb management, pain management, diabetes management, orthotics and prosthetics management. Classes were taught by PT, OT, nursing, nursing physiatrist, neuropsychiatrist and prosthetist.

New amputees need to be educated on wrapping their new lower extremity amputation to decrease post-surgical edema and form the limb for shrinker and possible prosthetic fitting. A figure-eight pattern is used covering the residual limb until no spaces are showing.



Nursing and therapy were educated on ace wrapping upper and lower extremity (leg) stumps. An annual competency was developed to keep the interdisciplinary team current on ace wrapping techniques.

"Good Blue"

These are pressure tolerant areas for the below knee amputee.

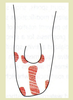
Front of the knee

Back of the knee

"Bad Red"

These are pressure intolerant areas.

Front of the knee



Back of the knee

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COMPETENCY BASED DEVELOPMENT SYSTEM

Employee Name (print) _____

Ace Wrapping Upper and Lower Extremity (Leg) Stumps

****Plan (for results other than independent)**
A = Review Policy and Procedure
B = Inservice Training
C = Video Review or Book
D = Self Study
E = Other (if other, you must specify under comments)

Critical Elements	1 Independent	2 Supervision	3 Needs Review	** Plan
1. Identify patient 2. Hand Hygiene 3. Explain procedure to patient				
BELOW KNEE AMPUTATION 4. Start at the end of the stump. Pull ace wrap diagonally, in an upward direction to secure the wrap upon itself. Wrap, making all turns in a diagonal direction, forming a criss-cross pattern.				
5. **NOTE:** Do not encircle the end of the stump with one turn. It may cause the skin to crease over the scar. Cover the inside, then outside end of the stump with each turn.				
6. Continue making diagonal turns. Apply firm pressure over the end of the stump. The Ace bandage pressure should become less and less as you wrap higher toward the thigh.				
7. Extend the wrap above your knee. There should be at least one turn above the kneecap. Anchor the ace bandage with tape. Do NOT use safety pins.				
ABOVE KNEE AMPUTATION 8. Start with the bandage in the groin area. Roll toward the outside, behind, and around the stump, covering the inside. Be sure to keep the bandage smooth. Avoid wrinkles as they may cause skin irritations.				
9. Continue making diagonal turns around the stump until all skin is covered with at least two layers of bandage and firm pressure is obtained over the end. NOTE: Avoid circling the end with one turn as this tends to cause skin creases in the scar. Never use circular turns as this constricts circulation. Include all soft tissue on the inside of the thigh at the groin.				
10. Begin the turn around the hip. The bandage should be placed as high as possible on the inside of the thigh then cross over the hip.				
11. Carry the bandage behind and around pelvis, crossing just below the waist on the non-amputated side. Returning to the amputated side, cross over the hip joint again.				
12. Finish the bandage by making diagonally turns around the end of the stump. Anchor the bandage with tape. Do not use safety pins.				
13. Hand Hygiene.				

Ace wrapping the stump after amputation prepares it for _____.

Ace wrapping _____ and _____ the stump.

Never use _____ _____ as they tend to constrict circulation.

Ace bandage and stump should be _____ and _____ before wrapping.

Re wrap your stump every _____ or whenever the bandage starts to slip or feel loose.

Comments:

Employee Signature:_____ **Print Name:** _____

Competency Validated by:_____ **Date:**_____

7.13

Results

At the February 2014 initial survey for the specialty certification by The Joint Commission, two key areas were identified by the surveyor that had not received enough attention from the Team: management of the contra lateral limb, and management of obesity related to weight issues, diet and complications such as diabetes.

Managing obesity related to weight issues and poor diet is an epidemic in the United States. Obesity is an underlying factor for cardiovascular diseases and diabetes. Dietary management and exercise are key factors to decreasing the one's risk of developing cardiovascular diseases and complication such as the loss of a limb.

The main causes of limb loss are vascular disease (54%), including diabetes and peripheral arterial disease, trauma (45%), and cancer (less than 2%). Nearly half of the individuals who have an amputation due to vascular disease will die within five years. As much as 55% of lower leg amputees resulting from diabetes require their second leg amputated within two to three years. African-Americans are four times more likely to require a lower leg amputation. Hospital cost from amputations in 2009 was nearly $8.3 billion.

Thoroughly inspect your feet daily, and keep them clean and dry.

When educating news amputees about the care of their residual limb, it is important to include the contra lateral limb. Inspecting the contra lateral limb daily allows for the person to notice changes early and seek further treatment before the problem escalates and results in a second limb loss. An easy way to teach patients is to give them a mirror with a long handle to search areas that are hard to see. Red or darkened areas on the foot that do not blanch white when pressed against and released should be monitored closely.

Conclusions

The interdisciplinary team learned about the need to complete a comprehensive evaluation of the needs of individual amputee patients. This includes looking at how the short-term rehabilitation process fits into the long-term rehabilitation needs of the patient. The interdisciplinary team included appropriate programs with focus on care of the contra lateral limb, including helping amputee patients identify goals for diet and weight management issues for future successful long-term rehabilitation.

References

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