

Background

- Many hospital systems, as well as regulatory agencies like the Occupational Health and Safety Administration (OSHA), recognize that checklists and color codes can be valuable tools in the healthcare workplace.^{1,2}
 - Color coding provides a visual reminder system that can be used to convey information, alerting the user to a particular hazard or directing a specific course of action.

Objective

- To develop and test a system of checklists and color-coded inventory labels that can be used in the acute dialysis setting to reduce the risk of human error and improve efficiency during the process of obtaining the necessary supplies for a dialysis treatment

Approach

- Treatment set-up checklists were developed listing the supplies required for each dialysis modality; corresponding color-coded labels were added to inventory storage.
- Team members used the set-up checklist when pulling treatment supplies and were required to confirm that all required items had been retrieved before leaving the supply room or starting a dialysis treatment.

Modality-Specific Supply Checklists

SSOS Safety Set-Up of Supplies Supply List for Apheresis

SSOS Safety Set-Up of Supplies Supply List for CRRT

SSOS Safety Set-Up of Supplies Supply List for PD

SSOS Safety Set-Up of Supplies Supply List for HD

Hardware	Machine Supplies
<input type="checkbox"/> RO adapter to check for Minnicare	<input type="checkbox"/> Dialyzer x 2
<input type="checkbox"/> Nut driver	<input type="checkbox"/> Blood lines x 2
<input type="checkbox"/> Screwdriver	<input type="checkbox"/> Myron L meter
<input type="checkbox"/> Hose clamp	<input type="checkbox"/> Chlorine/chloramines test strips
	<input type="checkbox"/> Residual bleach test strips
	<input type="checkbox"/> pH test strips
	<input type="checkbox"/> Minnicare residual test strips
Medical Supplies	PPE
<input type="checkbox"/> Needles (15 g, 16 g, or 17 g order) x 2	<input type="checkbox"/> Gown x 1
<input type="checkbox"/> Alcohol pads x 8	<input type="checkbox"/> Masks x 2 (RN and patient)
<input type="checkbox"/> 2x2 or 4x4 gauze x 2	<input type="checkbox"/> Goggles or shield x1
<input type="checkbox"/> 10 cc syringe (catheter x 2; fistula/graft x 4; heparin maintenance x 2)	
<input type="checkbox"/> 3 cc syringe x 2	
<input type="checkbox"/> Chux x 2	
<input type="checkbox"/> Catheter end caps x 2	
<input type="checkbox"/> Recirculation cap x 1	
<input type="checkbox"/> Transducer x 1	
<input type="checkbox"/> Tourniquet x 1	
<input type="checkbox"/> Catheter dressing kit (tegaderm, bio-patch, chloraprep, mask, gloves)	
<input type="checkbox"/> Bandaid x 4	
<input type="checkbox"/> Paper or plastic tape	
Medications	
<input type="checkbox"/> Normal saline bags x 2	

Color-Coded Inventory Supply Labels

- Hemodialysis supplies
- Peritoneal dialysis supplies
- Continuous renal replacement therapy supplies
- Apheresis supplies

Results

- Use of color-coded inventory labels in conjunction with set-up checklists resulted in a decrease in supply errors.
- During testing, supplies were complete the first time the team member left the supply room in **100%** of bedside treatment set-ups assessed.
 - This resulted in an improvement in overall efficiency as team members saved up to **10 minutes** with each avoided return visit to the supply room.

Conclusions

- This initiative demonstrated that the use of color-coded inventory labels in conjunction with treatment set-up checklists can reduce errors and improve efficiency during dialysis treatment set-up.

References

1. Labels: OSHA Color Coding. St. Olaf College, Northfield, MN: <https://wp.stolaf.edu/ehs/labels-osh-color-coding/>
2. Gawande A. *The Checklist Manifesto: How to Get Things Right*. New York: Picador, 2011

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