If You Build It, They Will Use It: Creating Task Trainers for Simulation
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Background/Recommendation
Nurses required hands-on practice and competency assessment with two principal nursing procedures.

- Catheterization of uncircumcised males. Potential for paraphimosis (urologic emergency in which the foreskin becomes trapped behind the corona and forms a tight band of constricting tissue which can impair blood and lymphatic flow to the glans and prepuce). Left untreated there may be serious sequela.
- Peripheral IV Assessment and management of preventable injuries. PIV infiltrates can lead to localized tissue damage. In severe cases with DNA-binding vesicants, damage may extend to underlying tendons, ligaments and nerves.
- Exhaustive product searches yielded NO task trainers for purchase.
- Recommendation: Develop education plan including didactic, web based learning modules, and simulation using case studies. Produce task trainers.

Methodology

2 Task Trainers/2 Teams:

1. Pediatric Male Catheterization
   a) NPD Director, Simulation Center Manager and 2 Sim Techs
   b) The pediatric male catheterization trainer was made from silicone rubber. Molds were designed with hospital supplies and common office products to make anatomically correct trainers.
   c) The pediatric male catheterization trainer was made from silicone rubber. Molds were designed with hospital supplies and common office products to make anatomically correct trainers.

2. Peripheral IV Infiltrations
   a) NPD Director, Magnet Program Director, CNS for Vascular Access
   b) Arms made from hospital supplies and products from “crafting” stores that mimicked an infiltration and extravasation.
   c) The pediatric male catheterization trainer was made from silicone rubber. Molds were designed with hospital supplies and common office products to make anatomically correct trainers.

Supplies

Supplies for Catheterization Task Trainer (Sim Techs)
1. Platinum-catalyzed silicone with pigment
2. Plastic tray for base
3. Cap from Sharpies Extra Fine Point Permanent Marker
4. 5 cc syringe
5. Wire for urethra/meatus construction

Supplies for PIV Infiltration Task Trainer (Nursing)
1. IV arm boards covered with cut strips of heavy duty cotton
2. Additional heavy duty cotton at “infiltration site”
3. Support panty hose (size B) covered board to simulate “skin”
4. Reddish brown “blush” for extravasation
5. Purple eye shadow for “bruise”
6. IV Site simulated to look “real”
   a) 22g 1” IV Catheter
   b) “Blisters” cut from packing bubble wrap
   c) IV extension tubing & IV securement device with transparent dressing
7. Glove and tongue depressor taped inside glove to stabilize “hand” on arm
8. Cutting opening in the syringe rubber plunger seal
9. Silicone “curing”
10. Arm boards with “skin” reddened
11. Cutting “blisters”
12. Insertion of IV catheter

Results

Urinary Catheterization Training and Competency Assessment 2016:
- Web Based Training completion
- Simulation with task Trainers during Unit Based Competency Days

IV Infiltration Training and Competency Assessment 2015:
- Executed education plan consisting of objectives, case study, task trainers, and a list of resources available for clinical nurses to complete the training
- Scheduled “train the trainer” sessions
- Trainers’ and unit based Super Users’ competency verified
- Documentation of PIV infiltration and extravasation competency for trainers, Super Users and staff RNs entered into Learning Management System

Conclusion

Overall process included policy revisions for both issues, education plans, task trainer production, and “train the trainer” sessions for Unit Based Educators/CNSs with subsequent training of “super users” to train all clinical nurses. The goals for this competency assessment program was to provide nurses the skills needed to recognize infiltrations and to encourage increased vigilance of PIVs with irritant and vesicant medications and to provide staff nurses “practice” and competency verification for catheterizing an uncircumcised male.

Future Uses

This experience identified the lack of task trainers for pediatric nursing competency assessment. Seattle Children’s Nursing and the Learning and Simulation Center continue to collaborate on additional pediatric task trainers including the use of a 3-D printer.

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