OVERVIEW
The purpose of this independent study guide (ISG) is to acquaint nurses with information about linen usage and utilization, and to discuss the impact their linen choices have on patient care and the financial health of the facility.

Linen is an expensive consumable medical supply, necessary to provide high quality patient care and requires proper management to ensure rational and strategic use.

In order for hospitals to successfully manage linen, they must provide timely education to nurses regarding the proper use of linen items and the relationship between nursing and the laundry or linen department. This program will discuss the appropriate usage, or “rational consumption” of bedding, and patient and staff apparel.

INTENDED AUDIENCE
This educational program is intended for nurses and all other healthcare providers who use linen.

OBJECTIVES
After the completion of this educational program, the participant should be able to:

• Select the most appropriate linen item(s) for patient care and comfort.
• Identify policies essential to proper linen management.
• Discuss the relationship between choice and cost.
• Communicate the relationship between Nursing and the Laundry/Linen Department.
• List ways that the nurse can affect linen utilization.
• Discuss the impact of linen losses.
GUIDE FOR STUDY
To complete this study guide on how to make smart linen choices:

1. Read the overview and objectives for this educational activity and compare them with your own learning objectives.
2. Read the contents of the study guide.
3. Return booklet and answer sheet to your education department.
4. Obtain “Feedback” and “References” material from the education department.

As an adjunct to this study guide, it is strongly recommended that the learner watch the video “Smart Solutions for Linen Use” by Encompass Group, LLC.

INSTRUCTIONS FOR OBTAINING INSERVICE CREDIT
To receive inservice credit for this educational offering:

1. Complete the pre-assessment.
2. Study the materials in this module.
3. Complete the assessment and the evaluation.
4. Submit to your education department

ACCREDITATION/CREDIT HOURS
This module is for hospital in-service credit only unless otherwise specified by your institution.
Please answer true or false to the following questions on the answer sheet provided. DO NOT write in this book:

1. A patient’s entire bed should be changed daily to prevent the spread of microorganisms and to increase comfort.
   a. TRUE  b. FALSE

2. It is just as cost effective to use a folded flat sheet as to use a draw sheet.
   a. TRUE  b. FALSE

3. The nurse has no responsibility for controlling linen costs.
   a. TRUE  b. FALSE

4. Stained linen should be thrown in the trash.
   a. TRUE  b. FALSE

5. Bath blankets are designed to keep patients warm while receiving a bed bath.
   a. TRUE  b. FALSE

6. It is an expectation that employees and physicians will return scrubs that were worn home.
   a. TRUE  b. FALSE
PRE-ASSESSMENT CONTINUED

7. Ink does not wash out of linen.
   a. TRUE   b. FALSE

8. Tape left on linen will be washed out in the hot water used by the laundry.
   a. TRUE   b. FALSE

9. The most effective way to warm a patient is to layer several bath blankets.
   a. TRUE   b. FALSE

10. When a reusable underpad is needed for incontinent patients, it can also be used as a lifter.
    a. TRUE   b. FALSE
Nurses are the single largest users of linen in a healthcare facility. The choices they make have a direct bearing on patient care and product costs. Hospital linen products typically are used in many ways other than the purposes for which they were manufactured. This can result in shortened product life, increased reprocessing costs, and compromised patient care. The following guidelines focus on some commonly misused linen items and their proper use along with the appropriate usage quantities per inpatient day (less than one inpatient day means that non every patient uses that item).

**BATH BLANKETS**

*Normal Use per Inpatient Day = .7*

Bath blankets were originally designed to dry patients and keep them warm during a bed bath. The bath blanket is an alternative to thermal blankets and spreads for patient warmth. The most efficient way to create additional warmth with a bath blanket is to cover it with a flat sheet, which will trap the warm air, created by the patient’s body and prevent it from escaping. Patients returning from surgery often have 1 or 2 blankets. These blankets should remain with the patient until the patient is discharged, unless they become soiled or wet.

Bath blankets are also one of the most misused items in the hospital’s linen inventory. They may often be used in place of a draw sheet or a flat sheet and a lifter, which is a potentially dangerous practice. Although a bath blanket is heavier than a draw sheet, it has a looser weave designed to create warmth and is not constructed to support normal body weights. In many facilities bath blankets are also used to absorb water during arthroscopic procedures.
in surgery or as drop cloths for painters. These misuses increase poundage in the laundry and cost to the hospital.

**BATH TOWELS**

*Normal Use per Inpatient Day = 2.0 to 3.0*

Bath towels are used in nearly every department of the hospital. Abnormally high usage may indicate that they are being misused as cleaning cloths, doorstops, incontinence containment devices and placemats on cleaning or crash carts. These misuses often create unnecessary product shortages, decreased product life and increased processing costs.

**DRAW SHEETS**

*Normal Use per Inpatient Day = 0.6 to 0.9*

Draw sheets are designed to lift and turn patients and to hold bottom sheets in place if fitted sheets are not in use. Draw sheets should not be used to hold fitted sheets in place. They should also not be used to create a pseudo reusable underpad, i.e. personnel should not fold disposable underpads inside of a draw sheet and place it next to the patient’s skin for incontinence containment. The draw sheet has no fluid resistance properties and will only retain moisture next to the patients skin rather than wick it away like a reusable or disposable underpad.

**FLAT SHEETS**

*Normal Use per Inpatient Day = 1.0*

Flat sheets are designed for use as a top sheet. Nursing may use flat sheets as an alternative to draw sheets if draw sheets are not available, but they are a more costly choice because they are heavier and cost more to launder. As mentioned above regarding draw sheets, a common misuse is to fold disposable underpads inside of a flat sheet and place next to the patient’s skin for incontinence containment. Flat sheets may also be used on top of bath, thermal or spread blankets to contain body heat and create added warmth. They weigh less and have a tighter weave than an additional bath,
thermal or spread blanket and are therefore a better choice for enhanced patient care and decreased cost.

**FITTED SHEETS**

*Normal Use per Inpatient Day = 1.0*

Fitted sheets are designed as the primary mattress covering on regular hospital beds. (Refer to manufacturer's recommendations before using on specialty mattresses.) Many times if the use of fitted sheets is higher than normal, it is due to an ineffective incontinent policy, which necessitates a full bed change. Knit fitted sheets are an excellent solution for hospitals that have different size mattresses because they fit a wide variety of mattress lengths. They are also softer and more comfortable to patient skin, and have excellent wicking properties with diaphoretic patients. However, staff should never clip call lights or pin anything to a knit fitted sheet. This causes pulls and holes in the knit fabric that will cause it to unravel further.

**MATTRESS PADS**

*Normal Use per Inpatient Day = 0.2 – 0.3*

Mattress pads are designed for patient comfort when conventional mattresses are in use. Mattress pads should never be used on a pressure relief mattress, mattress overlay or specialty bed because they counteract the therapeutic properties of these items. Mattress pads should be changed only upon patient discharge or when they become soiled.

**PATIENT GOWNS**

*Normal Use Per Inpatient Day = 0.3 – 0.5*

Patient gowns are the most widely used patient apparel. They are available in a variety of sizes to provide adequate patient coverage, with features like IV sleeves and telemetry pouches that facilitate procedures and treatments. However, misuses and abuses are numerous. Occasionally staff will wear patient gowns as warm up
jackets. “Double gowning,” the use of a second gown as a robe for the patient, usually occurs to compensate for poor coverage from an undersized gown. If the gown has an overlap of 10" or more, double gowning should not be necessary. Other common abuses include cutting ties and sleeves for I.V. access. If the current patient gown is not acceptable, nursing should bring this issue to the attention of the linen manager or hospital linen committee.

**REUSEABLE UNDERPADS**

*Normal Use per Incontinent Patient Day = 2.5*

Reusable underpads are designed for incontinent patients and patients with drainage. They are also an excellent lifter for these patients. Because a reusable underpad weighs more than a draw sheet (and therefore costs more to reprocess), it should not be used as a lifter for continent patients. The use of reusable underpads in conjunction with draw sheets is redundant, costly and strongly discouraged.

**THERMAL OR SPREAD BLANKETS**

*Normal Use per Inpatient Day = 0.3 – 0.6*

Inpatient beds are usually covered with a thermal blanket or spread blanket. It should be changed only when soiled or wet, and upon patient discharge. For additional warmth, the thermal can be “sandwiched” between 2 flat sheets i.e. covered with 1 flat sheet. As mentioned previously, the weave of the flat sheet is tighter, will hold in warmth, and is not as heavy as an additional blanket.

**WASHCLOTHS**

*Normal Use per Inpatient Day = 3.0 – 5.0*

Frequently, staff treat washcloths as disposable items. Many times they are used as cleaning rags by housekeeping and other employees. Additionally, nursing may discard them unnecessarily after cleaning an incontinent patient. This is an expensive practice since a washcloth can be laundered up to 10 times compared to the cost of buying a new one. The hospital laundry is capable of cleaning
and sanitizing washcloths of incontinent substances. If washcloth use is excessive, the hospital may consider purchasing disposable washcloths to reduce replacement and reprocessing costs. However, the increased cost of disposable waste must be considered prior to making this transition.

**PILLOWCASES**

*Normal Use per Inpatient Day = 1.5*

Although pillowcases are primarily used to cover patient pillows or crib mattresses, they can also be misused. Many times a disposable underpad can be tucked inside a pillowcase to contain incontinence. As explained above regarding draw and flat sheets, pillowcases have no wicking capabilities and actually hold moisture against patient skin. Patients usually receive two or more pillows. It is sometimes possible to reduce this number by using a better quality pillow. However, non-ambulatory patients and those with limited mobility usually require additional pillows for positioning and padding. Pillowcases on positioning pillows should be changed only when soiled. If high quantities of pillows are used for positioning, the hospital may want to consider purchasing reusable patient positioners.
Therapeutic support surfaces (TSS) generally have a minimum of four inches of foam inside the mattress and are intended to provide early pressure sore prevention to the hospitalized patient. Most mattresses in this category are specifically designed to offer therapeutic low-pressure therapy and comfort. In fact, as a result of their design and construction, therapeutic support surfaces virtually eliminate the need for mattress pads and foam eggcrate mattresses (historically used to provide comfort), and air mattress overlays (used to provide pressure reduction).

In order for the patient to derive the greatest benefit from a therapeutic support surfaces, the patient’s skin surface should have maximum contact with the mattress. Simply stated, the bed should not be layered with extraneous linen. Bed makeup should be as minimal as possible, consisting of a fitted sheet, top sheet, pillowcase, and spread blanket, with an incontinent pad only if clinically necessary. Linen placed between the patient and a therapeutic support surface diminishes the pressure-reducing capabilities of the mattress.

Should a patient require assisted lifting while in bed, a draw sheet for a continent patient and an underpad for the incontinent patient can be utilized. Under no circumstances should mattress pads, draw sheets, or reusable underpads be routinely placed on therapeutic mattresses. In addition, it is important for nursing staff to remember that therapeutic support surfaces do not eliminate the need to turn immobile patients every two hours or as often as recommended by the specific hospital’s policy for bedridden patients.
SECTION 3
PILLOWS

Generally speaking most hospitals do not have enough pillows in circulation. If there are enough in inventory, they are often inadequately distributed throughout the facility. Many pillows end up in the laundry or stuffed in closets where they sit idle. Frequently, pillows are not found in sufficient numbers at the point of use. This is especially true in the emergency department and the OR where pillows may transfer out with patients.

A facility should conduct a yearly house-wide pillow inventory. As a general rule of thumb a facility should have 3.5 pillows per bed in service. Pillow replacement should be approximately 25-50% of the pillow inventory every two years.

Reusable pillows are usually more cost effective than disposables. They should be date-tagged when placed in service; and policies should be written and in serviced regarding their cleaning and distribution. Disposable pillows may have a place in the hospital depending on the type of clinical services offered. However, they contribute to a hospital’s solid waste costs. Disposable pillows are frequently reused though most are intended as single-use items. This can be an infection control issue and should be brought to the attention of the facility’s Infection Control Practitioner.
SECTION 4

NON-CIRCULATING INVENTORY

Patient Area Inventory Levels

It is a common practice for some departments to have significant amounts of linen in storage locations other than the designated linen cart, closet, or shelf. This practice results in dead stock and ties up valuable inventory dollars. Additionally, the opportunity for pilferage is greatly increased when patients and visitors have easy access to large amounts of linen. Common hospital examples include storage of linen in patient room cabinets and drawers, chairs, nurse servers, windowsills, and baby bassinets.

**ACTION STEPS:**
1. Identify all unnecessary clean linen holding areas on each unit or service location
2. Eliminate unnecessary stock in these areas
3. Evaluate linen accessibility to each nursing unit
4. Establish “mini” par levels for cabinets where such storage is essential
5. Educate staff of changes in procedure and the rationale.

**EXPECTED RESULTS:**
1. Elimination of dead stock
2. Elimination of false stock outs or shortages
3. Reduced theft
All hospitals must contend with linen loss whether it is deliberate or unintended. Identifying and eliminating unnecessary loss of linen due to reasons other than normal wear and tear should be a major emphasis for hospitals. Although steps can be taken to combat linen loss, each of the reasons listed below, if unchecked, can cause the hospital to incur large expenses for linen replacement.

**REASONS FOR LINEN LOSS INCLUDE**

1. Visitor access to linen carts/closets.
2. Linen carts/closets found near exits.
3. Linen uncovered in hallways.
4. Low-income patients are allowed to take products because employees feel sorry for them.
5. Patients and nurses feel that the cost of a hospital stay justifies free linen.
6. Main linen distribution room is left unlocked.
7. Nursery linen may be given to new mothers as a starter kit for which the hospital does not get reimbursed.
8. Patients believe that linen stored in nightstands or bassinetttes can be taken home because it was in their room.
9. Ambulance personnel have access to linen in the emergency room.
10. Employees are taking linen and scrubs for resale.
11. Surgeons/Interns/Residents and employees are leaving the hospital wearing scrubs or taking them to stock up for the rest of their careers.
12. Linen is being used to clean equipment or spills and thrown away.
13. Linen is being transferred to a long-term care facility in the ambulance along with the patient. This can often include draw sheets, flat sheets, patient apparel, and blankets. Many long-term care facilities have very small budgets for linen replacement because of the constant infusion from local hospitals.

14. Linen is being transferred to the mortuary with an expired patient.

If staff suspects linen losses are occurring, the matter should be discussed with the department administrator. The linen department or committee should also be made aware of the probability in order to identify ways to discourage theft and prevent further losses.
In order to reduce total linen related costs and optimize patient care, it is necessary for the hospital to implement proactive strategies for linen use, distribution, and procurement. The success of this initiative is contingent upon staff involvement in decision-making and their clear understanding of the goals and objectives of the linen program.

The purpose of the linen task force is to review current linen utilization practices, policies and procedures, and to make recommendations that will reduce costs related to linen use while maintaining or improving the quality of patient care. Members should be aware that the goals and objectives are supported by hospital administration, and that all proposed policy and procedural changes which result in cost savings while maintaining or improving patient care are appropriate, necessary, and welcome outcomes. There are specific policies that hospitals should implement to assist nurses in making the right linen choices. The task force will be primarily responsible for the development of these policies with the needed representation from nursing and all end users of linen. The policies that usually have the greatest impact on linen utilization are bed make-up/linen change, discard and garment control.

The task force should not be a forum to resolve individual user area service concerns. These should be resolved through the day-to-day management of the linen department. However, if the service issue request requires a change in product or procedure, the committee should address the issue. The committee should approve further and subsequent action or proposed change as well. It is vital that the task force is action-oriented and not simply a forum for general linen quality complaints.
Use the right product at the right time for the right reason

1. Never refuse to accommodate a patient’s request for linen.
2. Undo all snaps before placing linen into soiled linen bags.
3. Do not write on scrubs or any linen; the ink will not wash out.
4. Become a member of the linen task force.
5. Use rags only to clean up spills.
7. Do not use reusable underpads and draw sheets together.
8. Return excess pillows to the laundry for redistribution.
9. Do not cut linen items, such as patient gowns sleeves or ties.
10. Do not take hospital-owned scrubs home; return those at home.
11. Only take into the patient’s room what is needed.
12. Cubicles and storage bins in patient care areas such as the ED and PACU should be stocked only with what will be used within a 24-hour period.
13. Use the rag-out (discard) bag for torn stained linen.
14. Do not double gown patients.
15. Adhere to the bed make-up and linen change policy.
16. Staff should not use blankets to keep themselves warm.
17. Remove all tape and adhesives from soiled linen before putting items in to the soiled linen bag; hot water will set the adhesive.
18. Do not throw linen items in the trash. Return unacceptable linen items to the laundry in the rag-out bag for the laundry to determine if it can be mended or need to be discarded.
19. Discourage patients/family from taking linen.
20. Do not store extra linen in patients’ rooms.
21. Adhere to standards and guidelines of OSHA, APIC, AORN and other regulatory agencies.
Historically nurses have given little thought to the cost incurred by the hospital to provide linen to patients. The need to conserve linen was rarely discussed. As a result of today’s healthcare market, hospitals may not be reimbursed for all care provided by third party payers. Therefore, every employee must contribute to the overall financial health of the institution. Patients should never be denied linen that makes them more comfortable or is necessary for care, but excesses must be controlled. In the June 2000 issue of American Laundry News, Eric Frederick, President of the National Association of Institutional Linen Management (NAILM), states that there are no quick fixes to corralling linen costs, but a cost containment program tailored to hospital goals can be very successful.

One important thing to remember, however, is that all healthcare facilities are subject to a variety of federal, state, and local agencies (such as OSHA, and the State Boards of Health), and regulatory or advisory agencies (such as JCAHO, APIC, and AORN). As such, any policies or practices concerning the safe use, distribution, handling, or transporting of clean or soiled linen must be in compliance with agency directives. The information in this study guide is intended for use as a guideline, and any questions of a regulatory nature should be investigated by individual healthcare facilities based on their geography.
Please answer the following questions on the answer sheet provided. DO NOT write in this book:

1. A patient is not incontinent or having drainage but needs assistance with being turned in bed. The most appropriate item to place under the patient is:
   
   a. Bath blanket  
   b. Reusable underpad  
   c. Flat sheet folded as a draw sheet  
   d. Draw sheet

2. An appropriate response to a patient’s question about not having his bed automatically changed every day is:
   
   a. I’ll be glad to change your bed.  
   b. I don’t think that it needs it.  
   c. We’re not supposed to change them every day.  
   d. Our policy won’t let me do it.

3. The snaps on gowns should be:
   
   a. Cut off before putting it into the soiled linen bag.  
   b. Unsnapped before putting into the soiled linen bag.  
   c. Placed in the soiled linen bag as it is.  
   d. Discarded.

4. A therapeutic mattress should be protected with ____ before covering it with a bottom sheet.
   
   a. Nothing  
   b. Mattress pad  
   c. Reusable underpad  
   d. Disposable underpad
5. A common place for excess linen to be stored is:
   a. In a nightstand  c. On windowsills
   b. On the nurse server d. All of the above

6. Non-circulating inventory results in
   a. Dead stock  c. Inventory dollars being tied up
   b. False shortages d. All of the above

7. When a patient returns from surgery with a bath blanket, the blanket should be changed
   a. Immediately  c. Every morning until discharge
   b. When wet or soiled d. All of the above

8. Which policies should a hospital institute to help manage linen utilization
   a. Garment Control
   b. Bed make-up/linen change
   c. Discard
   d. All of the above

9. Patients and family members are more likely to take linen home if:
   a. Linen is stored in the bedside stand
   b. Linen is left in open areas
   c. They think the hospital bill is too high
   d. All of the above

10. Scrubs that are worn home by employees and physicians:
    a. Are not missed
    b. Do not affect the linen budget
    c. Should be returned
    e. All of the above
11. Which of the following statements is not true?

a. Reusable pillows should be inspected after each use.
b. Disposable pillows can be reused if not soiled.
c. Pillows should be dated-tagged when placed in service.
d. Pillows are rarely in sufficient numbers in the ED.

12. A thermal “sandwiched” between 2 flat sheets:

a. Does not make sense
b. Provides the patient with additional warmth because the weave holds in heat
c. Is too heavy to use
d. Should be replaced with a flat sheet “sandwiched” between 2 thermals

13. A discard policy will not:

a. Identify those items that were abused
b. Help justify replacement cost
c. Limit the rewash of linen that is not repairable
d. Allow nurses to throw away torn linen

14. A gown that adequately covers the patient should have a(n) __________ overlap.

a. 8 inch
b. 10 inch
c. 12 inch
d. 14 inch

15. All linen users have a responsibility to:

a. Choose the most appropriate product for the patient’s care and comfort
b. Control linen usage
c. Prevent theft
d. All of the above


REFERENCES


CDC Standard Precautions for Infection Control, Hospital Infection Control, 1996.


