

Urinary Tract Infections

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Management & Prevention

Updated May 2024



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long-term care facilities in Southwest Virginia with their
infection prevention and control programs.

Disclaimer

- For educational purposes only
- No endorsement of products, software, or tools

Audience

Nursing
Assistants

Nurses

Infection
Preventionist

Objectives

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Describe the basics
of a urinary tract
infection (UTI)

Discuss the disease
process of UTIs

Understand the
impact of personal
hygiene on UTI
prevention

Apply infection
control measures
to prevent UTIs

Introduction

- Roughly 75% of healthcare acquired urinary tract infections (UTIs) are associated with urinary catheters
- A urinary catheter increases a person's risk of a CAUTI 3-7% each day a catheter is left in place
- CDC estimates 13,000 deaths occur each year due to UTIs

Urinary System Review

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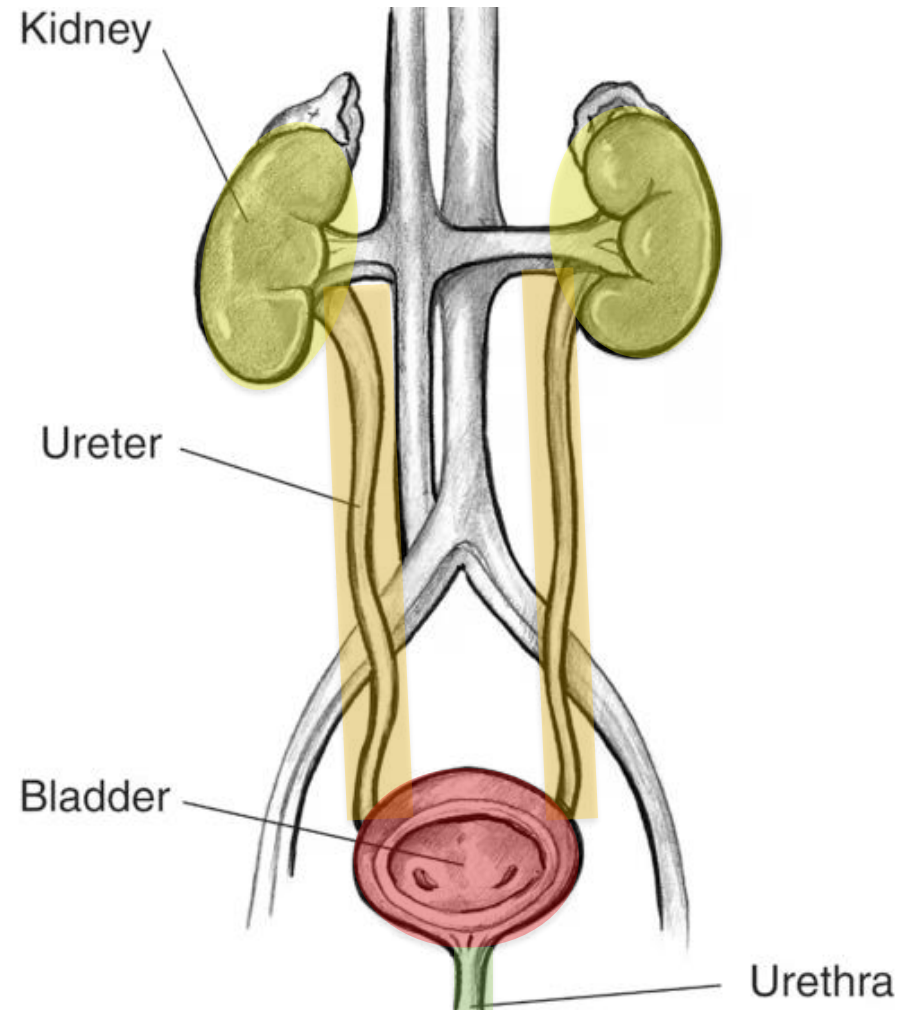


Image: National Institute of Diabetes and Digestive and Kidney Diseases, National Institute of Health. Retrieved from: <https://www.niddk.nih.gov/news/media-library/17589>

Urinary Tract Infections

- Two Types
 - Catheter Associated
 - Non-Catheter Associated



UTI Risk Factors

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Anatomy

- Females are higher risk due to short urethra and proximity to anus

Age

- Older adults more likely to experience a UTI
- Menopause in females / changes in vaginal flora

Previous Infections

Enlarged Prostate

Poor Hygiene

Indwelling Urinary Catheters

UTI Signs & Symptoms



Pain or burning during urination

Bloody urine

Frequent urination

Pressure in groin or abdomen

Increased urge to urinate without output

Fever

Chills

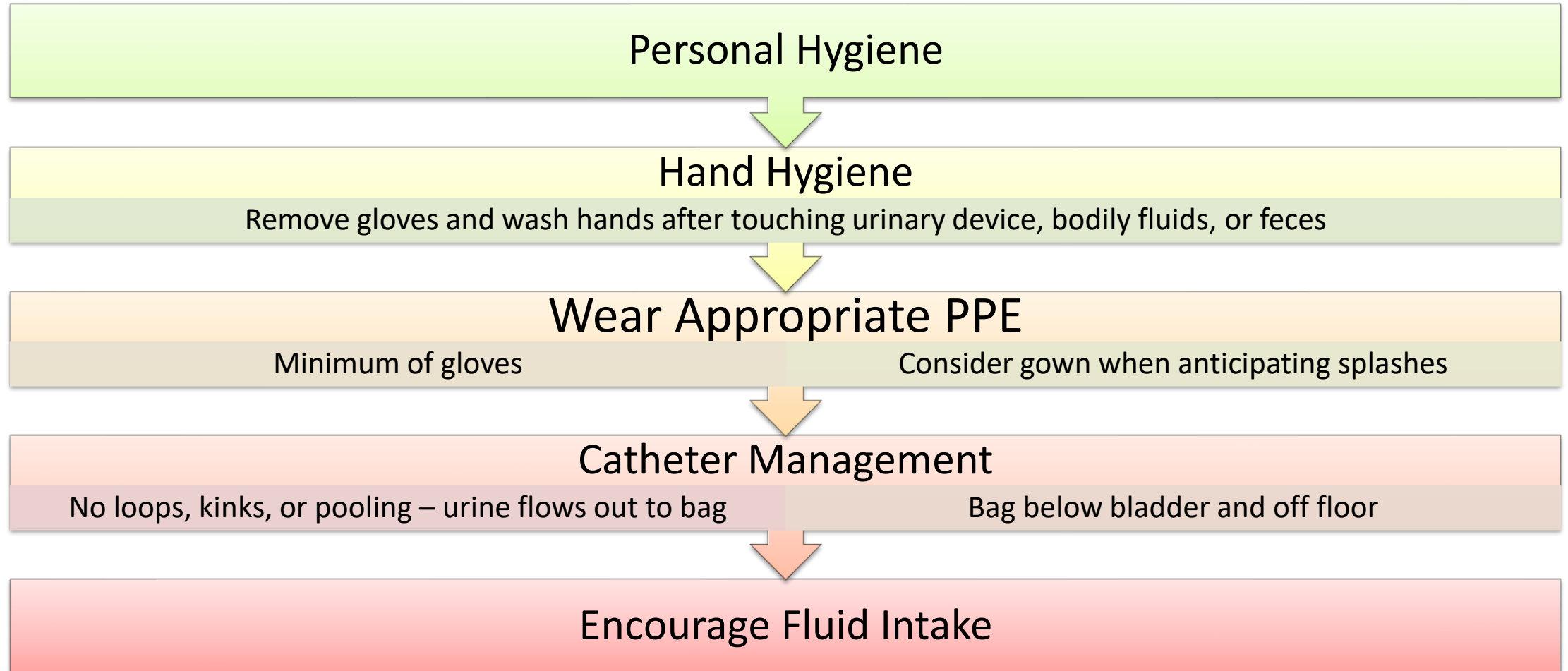
Lower back pain

UTI Diagnosis

- Consult physician
- Obtain urine specimen for culture & sensitivity
- Take antibiotics as prescribed

Prevention

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UTIs and Personal Hygiene

Previously Discussed:

- Poor hygiene can cause UTIs

Common UTI Organisms

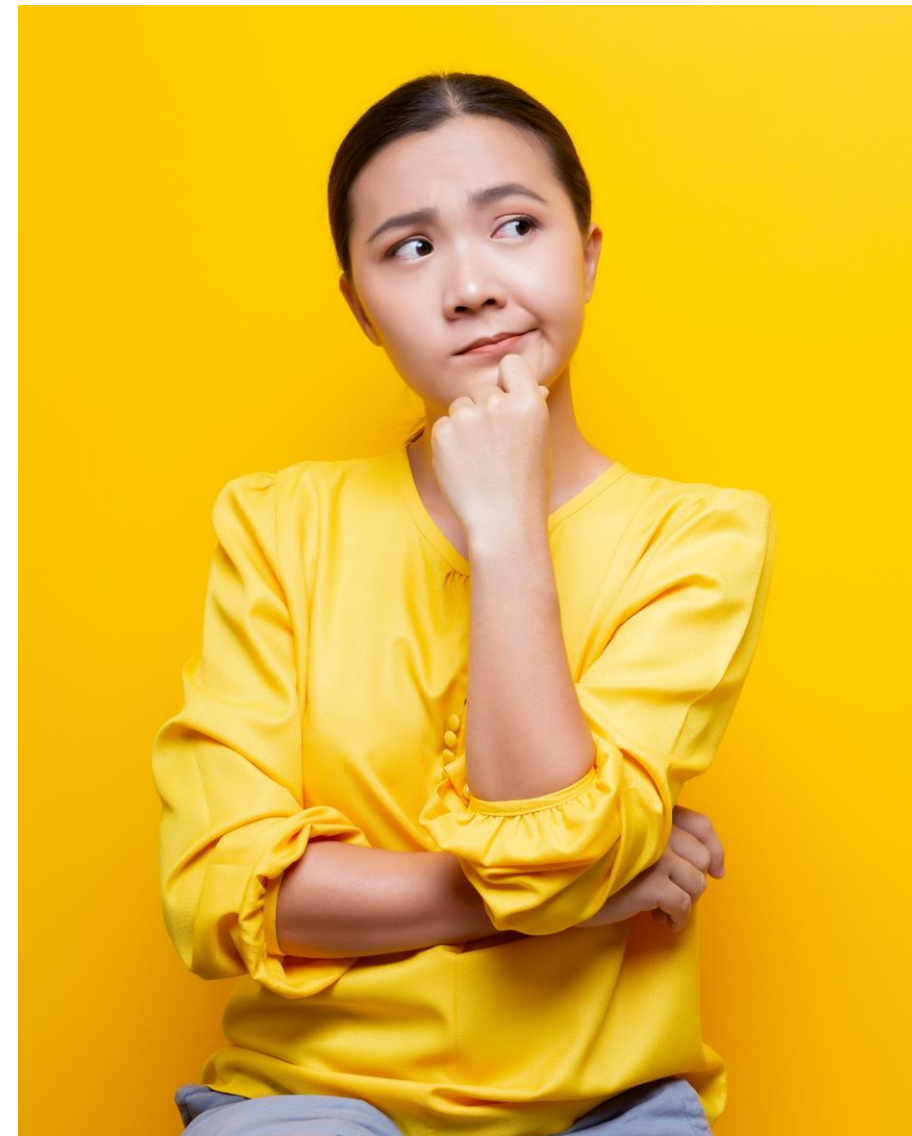
- Enterobacterales
 - Escherichia Coli (E. coli)
 - Klebsiella pneumoniae

How Does it Relate to Personal Hygiene?

- E. coli and K. pneumoniae are found in intestines & stool
- Improper wiping, perineal care, or poor hygiene can cause bacteria to enter the urethra
 - Women are likely to experience a UTI due to shorter urethra and proximity to anus

Providing Care

- How are we providing care?
 - Wipes?
 - Wash cloths with soap and water?



Personal Hygiene

Dedicated basin

Multiple Wash Cloths & Towels

- 2 - 4

Peri Care

- Proper Procedure for Male and Female

Change soiled linen promptly

Provide incontinence care with each brief change

Perineal Care - Female

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Open RN Project (2023, January 24) Perineal Care – Female. Retrieved from: <https://www.youtube.com/watch?v=6Xu25gk1y80&list=PLyzTdm5SU2ATfeeZtqAHSTTnsudFtZmTK&index=29>

Perineal Care - Male

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Open RN Project (2023, January 14) Perineal Care – Male. Retrieved from: <https://www.youtube.com/watch?v=n3Ed36YSz9w&list=PLyzTdm5SU2ATfeeZtqAHSTTnsudFtZmTK&index=31>

Hand Hygiene

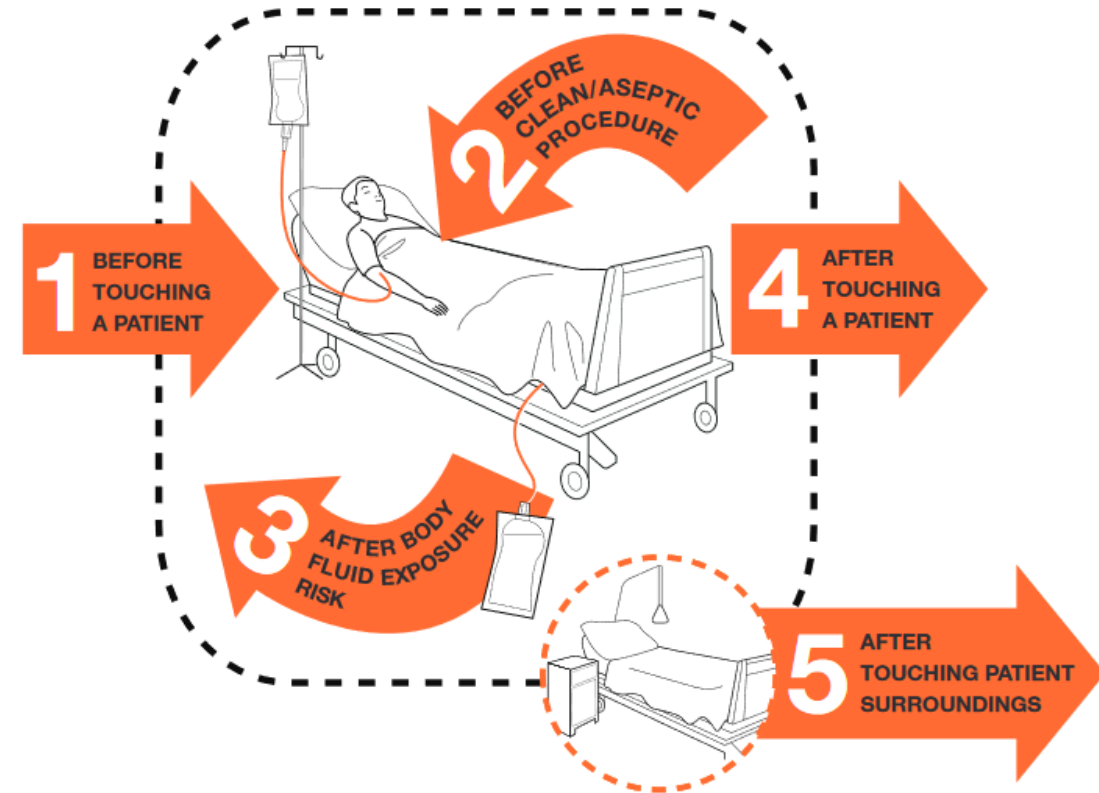
5 Moments of Hand Hygiene

- Before touching resident
- Before clean or aseptic procedure
- After bodily fluid exposure
- After touching resident
- After touching resident's surroundings

Soap and Water

- For visibly soiled hands
- After handling feces

Alcohol Based Hand Rub (ABHR)



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Patient Safety
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SAVE LIVES
Clean Your Hands

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Personal Protective Equipment

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Gloves

- Always use during personal hygiene

Gown Mask Eye Protection

- Consider when anticipating splashes
- Enhanced Barrier Precautions
- Transmission Based Precautions

Catheter Management



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graph TD; A[Hand Hygiene] --> B[Wear appropriate PPE]; B --> C[Perform Peri-care using soap & water or other gentle cleaning agent<br/>• Provide education to residents and family on proper care]; C --> D[Keep a Closed System<br/>• Change catheters and collection bags that come disconnected]; D --> E[Change catheter and bag per facility policy];
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Hand Hygiene

Wear appropriate PPE

Perform Peri-care using soap & water or other gentle cleaning agent

- Provide education to residents and family on proper care

Keep a Closed System

- Change catheters and collection bags that come disconnected

Change catheter and bag per facility policy

Catheter Management

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Bag hanging at bed side, below bladder & off floor

No loops, kinks, and avoid pooling

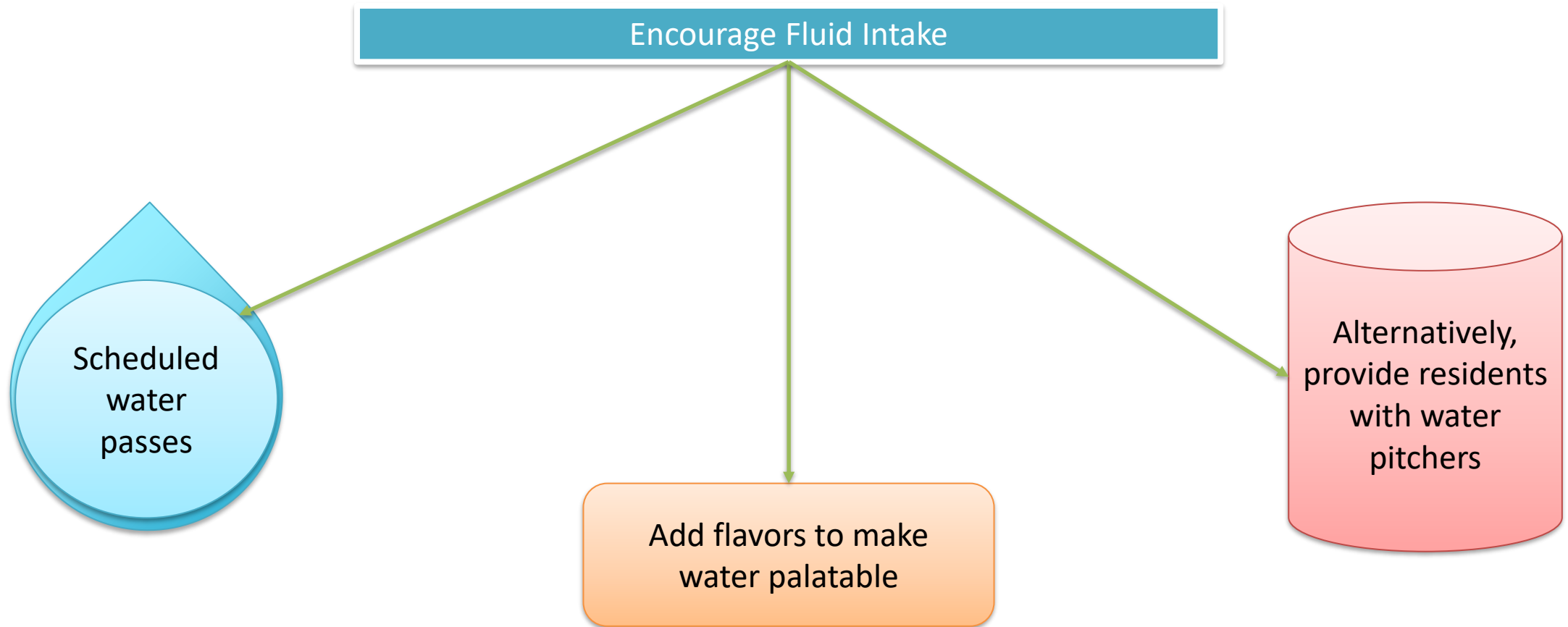
Monitor output, color, and consistency

Do not pour bodily fluids in sink

Wash urine collection container with soap and water

Fluid Intake

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Management

- Review culture and sensitivity tests
 - Provide appropriate and timely treatment
- Adhere to antibiotic treatment regimen
- Educate residents, families and staff
- Ensure appropriate precaution protocols
- Monitor & Surveillance
 - Keep accurate line list
 - Continual review for QAPI

Monitor & Surveillance: Line List

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What is it?

- A way of tracking infections that can assist in investigating an outbreak
 - Ex. Spreadsheet

Why do it?

- A proper line list provides the who (person), where (place), when (time) of an event
- In an investigation, it can provide clues to causes
 - Ex. Increase in UTIs → Specific unit or caregiver → Storing items in basin/Contaminating basin → Provide education → Reassess

Common Barriers to Care

- Knowledge
- Inadequate Training
 - Personal hygiene
 - Managing uncooperative residents & challenging behaviors
- Lack of Resources & Proper Equipment
- Time, Workload, & Staffing

Conclusion

- Females are likely to experience UTIs due to shorter urethra and proximity to anus
- Risk of UTI can be reduced with:
 - Proper hand hygiene of caregivers
 - Encouraging fluid intake
 - Proper perineal care
 - Removing unnecessary urinary catheters

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