“I have reviewed this book, and it is a huge step in pointing out the advantages of CIC over other methods of emptying the bladder. In essence, Dr. Lapides has proven that he was a genius in this area. This book gives a concise, clear instruction manual in all of the important aspects of simulating normal bladder function when the bladder is unable to function normally for various reasons.

Clean intermittent catheterization in these patients is a superior way to handle these clinical problems. The book teaches the important correct techniques to ensure a safe, clinically effective method that cuts down on the incidents of urinary tract infections to totally benefit the quality of life for these patients.”

- William W. Bohnert, MD, FACS

“This book was very impressive. It was clear, concise and very informative. It gives healthcare professionals a wonderful resource for teaching CIC to patients. CIC can be a very emotionally charged procedure for patients. This book gives the healthcare professional all the tools they need to teach CIC successfully. I felt that the teaching tools were extremely helpful. I appreciated how the book was organized into different patient groups since these subgroups have very individual needs. The list of what requires a physician’s attention can certainly get patients the resources they need.”

- Deborah L. Wilson, MD
Wellspect HealthCare places a special focus on support of educational development within the field of Urology.

This is an American publication.
Table of Contents

1  Special Acknowledgements
2  About CABIC
3  Member Biographies

Introduction & Assessment

5  Clean Intermittent Catheterization
7  Preparation for CIC
8  Indications for CIC
9  Patient Assessment Considerations

Teaching

10 Pediatrics
12 Adult Male
16 Adult Female
20 Spinal Cord Injured Male
24 Spinal Cord Injured Female

Follow Up & Testing

34 Checklist
36 Self-Assessment

Appendices

39 Appendix A Anatomy
43 Appendix B Troubleshooting
45 Appendix C Complications of Neurological Conditions
48 Appendix D CIC Outside the Home
49 Appendix E Nutritional Advice
51 Appendix F Teaching Materials
52 Appendix G UTI Guidelines
53 Appendix H Other Uses for Intermittent Catheterization
54 Appendix I Obtaining Medical Supplies
58 Appendix J Patient Resources
61 Appendix K Voiding Diary
62 Appendix L Answers to Self-Assessment
66 Appendix M Universal Sizes and Conversions
67 Glossary
We would like to thank the Wellspect HealthCare team, especially Nikki McCormick and Krysta Alexinas for their ongoing commitment to building this Advisory Board and supporting our many viewpoints into a national team project.

CABIC committee members include the following:

Xio Acosta
Suzanne Fortuna
Valerie Gordon
Angela Jackson
Maureen LeDanseur
Layna Korcal
Linda Payne
Lori Ramsey
Michael Ritmiller
Ginger Thomas
Monique Watts
About CABIC

The Clinical Advisory Board for Intermittent Catheterization (CABIC) was established to bring clinicians, educators and experts in the urologic field together from multidisciplinary programs across the United States.

Our Mission was to develop a set of national guidelines to assist healthcare professionals in the proper methods or skills attainment for the process of teaching clean intermittent catheterization (CIC) procedures.

Our Hope is that these guidelines will be used for the basis of current and consistent practice for all healthcare professionals.

Evidence based practice drives our commitment to provide current, consistent and safe care to our clients.
Maureen LeDanseur, RN, MSN, CNS
Maureen is a Clinical Nurse Manager for Inpatient Rehabilitation at UT Southwestern Medical Center in Dallas Texas. She is involved in the care and teaching of adult and pediatric patients with spinal cord injuries and neurologic disorders. Maureen has over 20 years of nursing experience and for the past 6 years has been teaching patients to perform clean intermittent catheterization. Maureen is a strong advocate of hydrophilic catheters and is interested in providing her patients with the most up-to-date products and information.

Layna Korcal, RN, Certified Pediatric Nurse
Layna has been a nurse for 27 years at Sparrow Health System in Lansing, Michigan, with 26 years in Pediatrics. Myelodysplasia Clinic Nurse Coordinator for the last 14 years, which includes a Urology follow up clinic. She teaches families and children Clean Intermittent Catherization on an outpatient and inpatient basis. She is passionate about the families and patients becoming independent and successful in their health care and day to day living. She is also the nurse coordinator for the Cleft Palate Clinic and works with the Pediatric Gastroenterologist at the Sparrow Regional Children’s Center Pediatric Subspecialty Clinics.

Valerie Gordon, RN
Valerie has practiced as a clinical Registered Nurse for over twenty years and is currently practicing at Children’s Hospital Los Angeles where she conducts urodynamics for a large Spina Bifida population. She teaches CIC to pediatric patients with a variety of urological conditions and is extremely interested in continuing education for patients and medical professionals. Valerie is passionate about her career and patients.

Lori Ramsey, LPN
Lori has worked with Ochsner Medical Center in Louisiana since 2005. She currently works as the lead nurse for the Gayle and Tom Benson Cancer Center Urology-Oncology Clinic and as Nurse Coordinator for the Multidisciplinary Urology-Oncology Clinic at Oschner. Lori works with the adult population, teaching CIC to both men and women with varied medical diagnosis including post operative retention and neurogenic bladder. She is a member of SUNA and serves as Secretary for her local SUNA chapter. She co-heads Oschner’s prostate cancer support group and has many years of prior experience working in the field of urology.

Suzanne Fortuna, RN
Suzanne is a Registered Nurse at Rainbow Babies Hospital in Cleveland, Ohio. She has over 15 years experience with pediatric urology, works with a high volume of patients and takes interest on the latest urological developments and advances.
Member Biographies

Michael Ritmiller, PA
Mike has worked as a neurourology Physician Assistant at Chesapeake Urology for the past 6 years and Kernan Rehabilitation Hospital for the past 5 1/2 years, where he works with the SCI, MS, CVA and TBI population concerning urological issues. Mike has worked extensively with the nursing staff, setting up guidelines and protocols concerning urology and neurogenic bladder. He has been a member of the Medical Executive Committee for Kernan Hospital for over three years and is also a member of the AUA and ICS.

Xio Acosta, RN
Xio assesses and teaches intermittent catheterization at Craig Rehabilitation Hospital in Englewood, Colorado, with over twenty years of experience in her field. Xio works in the outpatient spinal cord injury clinic, is a dedicated patient advocate, actively searches for the best solutions for her patients and is instrumental in Mitrofanoff and ACE education.

Angela Jackson, RN
Angela graduated from the University of Louisiana Monroe with a Bachelor’s Degree in Nursing in 1989. She practiced for 14 years with nephrology and dialysis patients before joining the Department of Urology in 2004 at The Moffitt Cancer Center. Currently she works with the University of South Florida Department of Urology as the Urology Clinical Supervisor specializing in urooncology, reconstructive urology and sexual disorders.

Ginger Thomas, CPRN
Ginger has over 25 years experience working in pediatrics, and currently serves as the extrophy coordinator at Seattle Children’s Hospital. Ginger works primarily with complex urologic reconstructions and she has extensive experience with CIC for Mitrofanoff and ACE channels.

Linda Payne, RN
Linda has recently retired from her position as Manager for the Children’s Urology Center in Lubbock, Texas. She has many years of experience in nursing and training patients within the realm of intermittent catheterization.

Monique Watts, RN
Monique has been working with the Urology Associates group in Scottsdale, AZ for over twenty years. She is actively involved with intermittent catheterization training and education.
Introduction and Assessment
Clean Intermittent Catheterization

This booklet is focused on teaching single use Clean Intermittent Catheterization (CIC). We acknowledge there are some conditions/circumstances that may require sterile technique to be practiced. See your facility’s policies and procedures.

Your role is to educate the patient/caregiver on the benefits, limitations and risks of CIC to help them understand how CIC will improve their health and quality of life.

What is Clean Intermittent Catheterization (CIC)?

CIC is a safe and effective alternative for emptying the bladder. It involves the intermittent introduction of a special tube (urinary catheter) into the bladder to drain its contents. The catheter is disposed of upon complete emptying, and a new catheter is used for each catheterization.

The Urinary System
Introduction & Assessment

Benefits of CIC

• Maintenance of the urinary system integrity
• Prevention of urinary tract infections (UTIs)
• Continence
• Convenience, independence and comfort over indwelling catheters
• Convenience and hygiene over catheter reuse methods

Limitations

• Time and environmental constraints
  - Availability of caregiver (if applicable)
  - Availability of accessible restroom or appropriate area
• Dexterity
• Compliance

Risks

• Pain
• False passages, strictures, stenosis
• Bleeding
• Infection
• Epididymitis
Introduction & Assessment

Preparation for CIC

To prepare your patient for CIC at home, you will need to introduce the basic necessary considerations.

Necessary Supplies

- Clean hands
- Catheter
- Lubrication (if catheter is not hydrophilic)
- Toilet or other draining receptacle
- Cleansing wipes, or cleaning agent and washcloth
- Gloves (if applicable; ie. non-family caregiver, school nurse)

*Latex allergies are common. Latex-free products are recommended in all cases.*

Environmental Considerations

- Designation of appropriate environment for catheterization
  - Home
  - Work
  - School

See Appendix D: CIC Outside the Home

Educational Materials

- A wide variety of educational materials are available for patients

See Appendix J: Patient Resources

- Provide patient with a copy of the original catheter supply order and/or distributor information prior to discharge or before they leave the office.

See Appendix I: Obtaining Medical Supplies
Indications for CIC

Your patient is experiencing bladder dysfunction or the inability to appropriately empty the bladder.

Conditions requiring CIC may include:

Neurogenic bladder
• Spinal Cord Injury (SCI)
• Spina Bifida (SB)
• Multiple Sclerosis (MS)
• Traumatic Brain Injury (TBI)
• Cerebrovascular Accident (Stroke/CVA)
• Idiopathic bladder
• Other disease processes

Post-Operative
• Complications patient could experience after surgery
• Anesthesia
• Drug side effects
• Mobility

Outflow Obstruction
• Benign Prostate Hyperplasia (BPH)
• Urethral strictures
• Other conditions that may reduce outflow

Birth Defect
• Bladder exstrophy
• Prune Belly Syndrome

Trauma
• Physical Injuries
• Psychological Injuries
Patient Assessment Considerations

In order for your patient to be successful and compliant with a new CIC program, they need to be ready, willing and able, or have a caregiver available. The following key areas should be evaluated when assessing patient readiness for CIC.

Psychological
- Motivation
  - Wellness
  - Independence
  - Discharge/return to home
- Diagnosis
  - Mental capacity/comprehension
  - Medications

Emotional
- Acceptance
- Comfort of patient and/or caregiver
- Understanding
- Maturity

Physical
- Diagnosis
  - Dexterity
- Ability
  - Mobility
  - Age
  - Fine motor skill function

Environmental/Economical
- Financial situation
- Employment status
- Support Availability
  - Caregiver schedule
  - Transportation arrangements
    - Supplies
    - Appointments

Social
- Dynamics of living situation
- Family Support
- Cultural Dynamics
  - Ethnicity
  - Religious Beliefs
Teaching
Teaching

Your role is to provide proper teaching tools and techniques to educate the patient and/or caregiver on performing CIC.

The following sections provide population-specific instructions for teaching CIC to the following groups:

- Pediatrics
- Adult Male
- Adult Female
- Spinal Cord Injured Male
- Spinal Cord Injured Female

* Stoma (urinary) information is covered in each section

After you have walked the patient through the proper procedures for practicing CIC at home, a return demonstration should be performed by the patient before they leave the office or hospital to ensure comprehension.

A regular follow-up plan should be determined in a method convenient for the patient. Initial suggested follow-up methods could include:

- Phone call
- Email
- Office Visit
- Voiding diary

Measurement conversion note: 1 oz = 30 mL = 30 cc  
1 inch = 2.54 cm

At the end of this section, you will find an overview of common CIC complications.
Complications

All catheter-related complications require a physician’s attention and may include:

- Trauma to bladder
- Disrupted urethra
- Bleeding - DVT prevention medications (ie. Cumadin) and check PT/INR (blood test)
- False passages
- Overflow
- Autonomic Dysreflexia
- Detrusor External Sphincter
- Dyssynergia (DESD)
- Neurogenic Detrusor Overactivity (NDD)
- Pain
- Interstitial Cystitis (IC)
- Bleeding
- Infection (UTI)
- Epididymitis
- Stricture/Scarring
- Yeast infections
- Fistula

See Appendix B: Troubleshooting for more information on some of the above issues
Teaching: Pediatrics
Teaching: Pediatrics

Pediatric Catheter Size Chart

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Catheter Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>6 FR</td>
</tr>
<tr>
<td>2-5</td>
<td>6/8 FR</td>
</tr>
<tr>
<td>5-10</td>
<td>8/10 FR</td>
</tr>
<tr>
<td>10-16</td>
<td>10/12 FR</td>
</tr>
<tr>
<td>16+</td>
<td>12-16 FR</td>
</tr>
</tbody>
</table>

If unsure of size, always start with a smaller size and move up in diameter if needed. There are several lengths available, use the appropriate length for the patient’s needs.

1. Gather supplies
   - Choose an appropriate catheter size and type
   - Drainage receptacle
   - Cleaning agent and towelette/washcloth
   - Adaptive devices as needed (mirror)
   - Gloves (latex-free)

2. Choose a comfortable and appropriate location
   - Clean environment
   - Accessible bathroom
   - Changing table for small children and babies

3. Wash hands with soap and warm water

4. Prepare supplies on a clean surface
   - Hydrophilic catheter
     - Add water to catheter package or break water sachet if included with catheter
   - Conventional catheter
     - Add lubrication gel evenly to thoroughly coat catheter surface

See Appendix A: Anatomy
5. Prepare patient
   - For children, you can lie them on a flat surface and drain catheter into a receptacle, or have them sit on or nearby the toilet
   - For drainage into a toilet, the patient can stand over or sit on it as normal
   See Appendix A: Anatomy for positioning

6. Expose area and cleanse
   - Female
     - Cleanse front to back
   - Uncircumcised Male
     - Retract foreskin, expose meatus and cleanse
   - Circumcised Males
     - Cleanse in circular motion starting with urethral opening
   - Stomas
     - Cleanse stoma and surrounding area with soap and water or perfume-free wipe

7. Gently insert catheter until urine begins to flow
   - After urine first begins to flow, advance the catheter about 1cm further for pediatrics

8. If catheter is difficult to pass
   - Instruct the patient to take a deep breath and relax while you rotate the catheter and continue to reinsert
   - If you are unable to pass the catheter, do not force it
   See Appendix B: Troubleshooting

9. When urine flow stops
   - Rotate catheter while removing slowly
   - If urine flow returns, pause and allow complete drainage
Teaching: Pediatrics

10. Cleanse area
   - Female
     - Cleanse front to back
   - Uncircumcised Male
     - Cleanse before and after retracting foreskin
   - Circumcised Males
     - Cleanse in circular motion starting with urethral opening
   - Stomas
     - Cleanse stoma and surrounding area with soap/water or perfume-free wipe

11. Dispose of catheter and supplies

12. Wash hands with soap and water

Encouraging Progressive Independence

Depending on the cognitive and physical abilities of the child, when teaching self care for independent CIC reference the following guidelines:

Toddler/preschool
Independently wash their hands and gather supplies

5 – 6 years
Wash hands, gather supplies, open packages, beginning technique (such as holding the catheter)

6 – 8 years
Begin learning to insert the catheter in addition to all recommendations for younger age groups

9 – 12+ years
Follow all steps 1-12 independently where physical capability allows

Teens
Independent CIC with occasional monitoring of outcome (i.e. a used catheter and showing voided volume to confirm compliance)
**Special Pediatric Considerations**

**Pediatric Stoma Patients**
Minimum catheter size of 10FR, 16” catheter length.
Coudé tip may be helpful for difficult passages to ease insertion.
Augmented bladders may require bladder irrigation and a larger size due to mucus production.

**Bladder capacity**
Typically calculated in ounces by Child’s Age +2.
(i.e. 6 year old child = 6+2 = 8 oz capacity)

**Frequency**
Every 3 hours, though this may vary.
Physician or provider will determine the frequency.

**Gloves**
Encourage glove use when applicable (school, day care, non-family caregivers). Latex-free products should be used across the board, but especially important for pediatrics.

**Catheter Storage**
Keep a supply in multiple areas.
(Grandma’s house, school, backpack, locker, etc.)

**School Considerations**
See Appendix D: CIC Outside the Home

**Teaching Tools**
Special educational tools are available tailored for pediatrics.
Some of these include training dolls, coloring books, flashcards, books, games, videos, etc.
See Appendix F: Teaching Materials
Teaching: Adult Male
**Teaching: Adult Male**

### Male Catheter Size Considerations

14-16 FR is the most common diameter size for adult males. If you are unsure of the size, always start with a smaller diameter and move up in size as needed.

Most adult males will use a 16” length.

Coudé catheters have a curved tip and are used for patients who have difficulty passing a straight catheter due to urethral stricture or obstruction. Coudé catheters can be especially helpful in patients with BPH or an elevated bladder neck.

See Appendix A for more details on proper coudé tip insertion.

---

1. **Gather supplies**
   - Choose an appropriate catheter size and type
   - Drainage receptacle
   - Cleaning agent and towelette/washcloth
   - Adaptive devices as needed
   - Gloves *(latex-free)*

2. **Choose a comfortable and appropriate location**
   - Clean environment
   - Home
     - Toilet, wheelchair, shower, bed
   - Work/School
     - Accessible restroom, stall

3. **Wash hands with soap and warm water**

   See Appendix A: Anatomy
4. **Prepare supplies on a clean surface**
   - Hydrophilic catheter
     - Add water to catheter package or break water sachet if included with catheter
   - Conventional catheter
     - Add lubrication gel evenly to thoroughly coat catheter surface

5. **Prepare patient**
   - Position patient standing over toilet or position drainage receptacle
     See Appendix A: Anatomy for positioning

6. **Expose area and cleanse**
   - Uncircumcised Males
     - Retract foreskin, expose meatus and cleanse
   - Circumcised Males
     - Cleanse in circular motion starting with urethral opening
   - Stomas
     - Cleanse stoma and surrounding area with soap and water or perfume-free wipe

7. **Extend penis upward**
   See Appendix A: Anatomy,

8. **Insert Catheter**
   - Gently insert catheter until urine begins to flow
     (*Coudé tip pointed upward with insertion)
   - After urine first begins to flow, advance catheter 3 cm further for adults

9. **If catheter is difficult to pass**
   - Instruct the patient to cough or take a deep breath and relax while you hold slow steady pressure and allow catheter to pass freely
   - If you are unable to pass the catheter, attempt to reposition penis. If unsuccessful, do not force it
     See Appendix B: Troubleshooting
10. When urine flow stops
   - Remove slowly half way out, then tilt penis up and withdraw
   - If urine flow returns, pause and allow complete drainage

11. Cleanse area
   - Uncircumcised Males
     - Recleanse before and after repositioning foreskin
   - Circumcised Males
     - Recleanse in circular motion starting with urethral opening
   - Stomas
     - Cleanse stoma and surrounding area with soap and water or perfume-free wipe

12. Reposition foreskin over penis (uncircumcised males only)

13. Dispose of catheter and supplies

14. Wash hands with soap and water
Male Stoma Patients
Minimum catheter size of 10FR, 16” catheter length. Coudé tip may be helpful for difficult passages to ease insertion. Augmented bladders may require bladder irrigation and a larger size due to mucus production.

Patient Reaction
Be aware of the patient reaction to the procedure. Some men may experience lightheadedness and/or fainting.

Frequency
Every 4 hours or 300 – 400 mL is average, though this may vary. Physician or provider will determine the frequency.

Gloves
Encourage glove use when applicable (school, non-family caregivers). Latex-free products should be used across the board.

Catheter Storage
Keep a supply in multiple areas (school, work, car, etc.)

Teaching Tools
Special educational and handling tools are available for men. See Appendix F: Teaching Materials
Teaching: Adult Female
1. **Gather supplies**
   - Choose an appropriate catheter size and type
   - Drainage receptacle
   - Cleaning agent and towelette/washcloth
   - Adaptive devices as needed **(mirror may be helpful)**
   - Gloves **(latex-free)**

2. **Choose a comfortable and appropriate location**
   - Clean environment should be chosen
   - Home
     - Toilet, wheelchair, shower, bed
   - Work & School
     - Accessible restroom, stall

3. **Wash hands with soap and warm water**

   See Appendix A: Anatomy
4. **Prepare supplies on a clean surface**
   - Hydrophilic catheter
     - Add water to catheter package or break water sachet if included with catheter
   - Conventional catheter
     - Add lubrication gel evenly to thoroughly coat catheter surface

5. **Prepare patient**
   - Position patient sitting on toilet or position drainage receptacle
     See Appendix A: Anatomy for positioning
   - Position mirror if needed to differentiate the urethral opening from the vaginal opening
     See Appendix F: Teaching Materials

![Urethral and vaginal openings diagram]

6. **Expose area and cleanse**
   - Cleanse front to back
   - Stomas
     - Cleanse stoma and surrounding area with soap and water or perfume-free wipe

7. **Gently insert catheter until urine begins to flow**
   - Some women prefer to stand with one leg raised to make insertion easier
   - If insertion is difficult, a tampon can be inserted into the vagina to assist with guidance of the catheter into the urethra
   - After urine first begins to flow, advance the catheter about 3 cm further for adults
8. If catheter is difficult to pass
   - Instruct the patient to take a deep breath and relax while you hold slow steady pressure and allow catheter to pass freely
   - If unsuccessful, do not force it
     See Appendix B: Troubleshooting

9. When urine flow stops
   - Rotate catheter while removing slowly
   - If urine flow returns, pause and allow complete drainage

10. Cleanse area
    - Cleanse front to back
    - Stoma
      - Cleanse stoma and surrounding area with soap and water or perfume-free wipe

11. Dispose of catheter and supplies

12. Wash hands with soap and water
Female Stoma Patients
Minimum catheter size of 10FR, 16” catheter length. Coudé tip may be helpful for difficult passages to ease insertion. Augmented bladders may require bladder irrigation and a larger size due to mucus production.

Frequency
Every 4 hours or 300 – 400 mL is average, though this may vary. Physician or provider will determine the frequency.

Gloves
Encourage glove use when applicable (school, non-family caregivers) Latex-free products should be used across the board

Catheter Storage
Keep a supply in multiple areas (school, work, car, etc.)

Teaching Tools
Often it is difficult for a female patient new to catheterization to differentiate between the urethral opening and the vaginal opening. This gets easier as they gain experience, but some tools such as vaginal guides and mirrors can be extremely helpful in identifying the urethral opening.

See Appendix F: Teaching Materials
Teaching:
Spinal Cord Injured Male
Teaching - Spinal Cord Injured Male

1. Gather supplies
   - Choose an appropriate catheter size and type
     - Some SCI patients will use a catheter with an attached collection bag
   - Drainage receptacle
     (if patient is not using catheter with attached collection bag)
   - Cleaning agent and towelette/washcloth
   - Adaptive devices as needed (see inset chart)
   - Gloves (latex-free)

2. Choose a comfortable and appropriate location
   - Clean environment should be chosen
     - Home
       - Toilet, wheelchair, shower, bed
     - Work & School
       - Accessible restroom, stall

3. Wash hands with soap and warm water
   See Appendix A: Anatomy
4. Prepare supplies on a clean surface
   - Hydrophilic catheter
     - Add water to catheter package or break water sachet if included with catheter
   - Conventional catheter
     - Add lubrication gel evenly to thoroughly coat catheter surface

5. Prepare patient
   - There are many possible positions depending on specifics of injury
     - Sitting, standing, wheelchair, lying down
   - Wheelchair
     - Position wheelchair against toilet if draining into toilet
   - Position drainage receptacle if not using toilet or collection bag
     See Appendix A: Anatomy for positioning

6. Expose area and cleanse
   - Uncircumcised males
     - Retract foreskin, expose meatus and cleanse
   - Circumcised Males
     - Cleanse in circular motion starting with urethral opening
   - Stomas
     - Cleanse stoma and surrounding area with soap/water or perfume-free wipe

7. Extend penis upward
   See Appendix A: Anatomy for positioning

8. Gently insert catheter until urine begins to flow
   (*Coudé tip pointed upward with insertion)
   - After urine first begins to flow, advance the catheter about 3 cm further for adults

9. If catheter is difficult to pass
   - Instruct the patient to cough or take a deep breath and relax while you hold slow steady pressure and allow catheter to pass freely
   - If you are unable to pass the catheter, attempt to reposition penis
   *If unsuccessful, do not force it
10. **When urine flow stops**
   - Remove slowly half way out, then tilt penis up and withdraw. If urine flow returns, pause and allow complete drainage

11. **Cleanse area**
   - Uncircumcised males
     - Recleanse before and after re-positioning foreskin
   - Circumcised Males
     - Cleanse in circular motion starting with urethral opening
   - Stoma
     - Cleanse stoma and surrounding area with soap and water or perfume-free wipe

12. **Reposition foreskin over penis** *(uncircumcised males only)*

13. **Dispose of catheter and supplies**

14. **Wash hands with soap and water**
Some Common Adaptive Devices

**Betty Hook**
Assists with pulling pants/underwear down

**Leg Spreader**
Used by males with spasticity needs

**Catheter Holder**
Assists to hold the catheter in place.

**Penis Collar**
Positions penis and holds in place

**Extender**
Allows for greater distance between patient and toilet

**Adaptable Clothing**
Allows for easier dressing and removal for patients with limited limb function. Elastic or snap-closure pants; sweat pants or gym pants

*Check with your preferred medical supplier on the availability and ordering information for these recommended devices.*
Teaching - Spinal Cord Injured Male

Special Male Considerations

Male Stoma Patients
Minimum catheter size of 10FR, 16” catheter length. Coudé tip may be helpful for difficult passages to ease insertion. Augmented bladders may require bladder irrigation and a larger size due to mucus production.

Patient Reaction
Be aware of the patient reaction to the procedure. Some men may experience lightheadedness and/or fainting.

Frequency
Every 4 hours or 300 – 400 mL is average, though this may vary. Physician or provider will determine the frequency.

Gloves
Encourage glove use when applicable (school, non-family caregivers) Latex-free products should be used across the board.

Catheter Storage
Keep a supply in multiple areas (school, work, car, etc.)

Teaching Tools
Special educational and handling tools are available for men. See Appendix F: Teaching Materials
Teaching:
Spinal Cord Injured Female
1. **Gather supplies**
   - Choose an appropriate catheter size and type
     - Some SCI patients will use a catheter with an attached collection bag
   - Drainage receptacle
     (if patient is not using catheter with attached collection bag)
   - Cleaning agent & towelette/washcloth
   - Adaptive devices as needed  
     *(see inset chart)*
   - Gloves *(latex-free)*

2. **Choose a comfortable and appropriate location**
   - Clean environment should be chosen
   - Home
     - Toilet, wheelchair, shower, bed
   - Work & School
     - Accessible restroom, stall

3. **Wash hands with soap and warm water**
   
   See Appendix A: Anatomy
Teaching - Spinal Cord Injured Female

4. Prepare supplies on a clean surface

- Hydrophilic catheter
  - Add water to catheter package or break water sachet if included with catheter
- Conventional catheter
  - Add lubrication gel evenly to thoroughly coat catheter surface

5. Prepare patient

- There are many possible positions depending on specifics of injury
  - Sitting, standing, wheelchair, lying down
    See Appendix A: Anatomy for positioning
- Wheelchair
  - Position wheelchair against toilet if draining into toilet
- Position drainage receptacle in not using toilet or collection bag
- Position mirror if needed to differentiate the urethral opening from the vaginal opening
  See Appendix F: Teaching Materials for additional tools

6. Expose area and cleanse

- Cleanse front to back
- Stomast
  - Cleanse stoma and surrounding area with soap and water or perfume-free wipe
7. Gently insert catheter until urine begins to flow
   • Some women prefer to stand with one leg raised to make insertion easier
   • If insertion is difficult, a tampon can be inserted into the vagina to assist with guidance of the catheter into the urethra
   • After urine first begins to flow, advance the catheter about 3 cm further for adults

8. If catheter is difficult to pass
   • Instruct the patient to take a deep breath and relax while you hold slow steady pressure and allow catheter to pass freely
   • If unsuccessful, do not force it
     See Appendix B: Troubleshooting

9. When urine flow stops
   • Rotate catheter while removing slowly
   • If urine flow returns, pause and allow complete drainage

10. Cleanse area
    • Cleanse front to back
    • Stoma
      - Cleanse stoma and surrounding area with soap and water or perfume-free wipe

11. Dispose of catheter and supplies

12. Wash hands with soap and water
Betty Hook
Assists with pulling pants/underwear down

Leg Spreader
Used by males with spasticity needs

Catheter Holder
Assists to hold the catheter in place.

Labia Spreader
Assists in spreading labia and keeping in position

Vaginal Guide
Allows for easier identification of urethral vs. vaginal openings

Extender
Allows for a greater distance between the patient and toilet

Pillow
Can be placed beneath female pelvis to create correct angle for catheter insertion

Adaptable Clothing
Allows for easier dressing and removal for patients with limited limb function. Elastic or snap-closure pants; sweat pants or gym pants

*Check with your preferred medical supplier on the availability and ordering information for these recommended devices.
Teaching - Spinal Cord Injured Female

Special Female Considerations

**Female Stoma Patients**
Minimum catheter size of 10FR, 16” catheter length.
Coudé tip may be helpful for difficult passages to ease insertion.
Augmented bladders may require bladder irrigation and a larger size due to mucus production.

**Frequency**
Every 4 hours or 300 – 400 mL is average, though this may vary.
Physician or provider will determine the frequency.

**Gloves**
Encourage glove use when applicable (school, non-family caregivers)
Latex-free products should be used across the board.

**Catheter Storage**
Keep a supply in multiple areas (school, work, car, etc.)

**Teaching Tools**
Often it is difficult for a female patient new to catheterization to differentiate between the urethral opening and the vaginal opening.
This gets easier as they gain experience, but some tools such as vaginal guides and mirrors can be extremely helpful in identifying the urethral opening.

See Appendix F: Teaching Materials
Follow Up and Testing
Your role is to assess the effectiveness of the prescribed CIC therapy. This should be completed using a method convenient for the patient, via phone call, follow-up office visit, email, etc. The following checklist will help to ensure you have covered the basics on the initial follow-up.

**How is the patient adapting to CIC in general?**
Is their overall attitude positive?

**Has the patient had any problems obtaining correct and adequate supplies?**
- Catheter type as prescribed
- Correct size
- Sufficient quantity
- Successful insurance processing (when applicable)

**Does the patient know what type, size and brand of catheter they were prescribed?**
- Is the patient compliant?
- How often are they performing CIC?
- Any leaking?
- What have post-void residuals been?

**Have there been any environmental changes or challenges for the patient since the last visit?**
- Support availability
- Employment status
- Schedule changes
- Timing conflicts
Follow Up and Testing

Have there been any changes in the patient’s health status?
Change or development of new symptoms
Medication changes
Hospitalization, other physician visits

Have you scheduled the next date and format for the next follow-up appointment?

Does the patient need a referral to another healthcare provider?
Gastrointestinal (GI)
Psychologist
Rehabilitation Specialist
Other consultants
Follow Up and Testing

Self-Assessment

An electronic version of this exam is on the included CD.
See Appendix L for Answer Key

This assessment can be used to determine your success at teaching CIC to your patients.

1. What is CIC?

2. Name 3 conditions that may require CIC?
   1. 
   2. 
   3. 

3. What is the standard recommended frequency of performing CIC?

4. What needs to be included on the Rx Form?

5. What considerations need to be made when choosing a supplier?

6. What 3 things need to be included in the Letter of Medical Necessity (LMN)?
   1. 
   2. 
   3.
Follow Up and Testing

7. Name 3 problems that may occur and recommended troubleshooting actions
   1.
   2.
   3.

8. What are 3 symptoms of a urinary tract infection?
   1.
   2.
   3.

9. Name 5 areas that need to be assessed to determine the patient’s readiness to learn:
   1.
   2.
   3.
   4.
   5.

10. What is the recommended action if no urine returns after inserting the catheter?

11. Name one emergent condition of the Spinal Cord Injured population that needs to be monitored:

12. What size catheter is most often used for stoma patients?

13. Describe the general anatomy of the urinary tract
Index of Appendices

Appendix A
Anatomy Illustrations
Insertion Tips and Illustrations
Positioning

Appendix B
Troubleshooting

Appendix C
Complications of Neurological Conditions

Appendix D
CIC Outside the Home

Appendix E
Nutritional Advice

Appendix F
Teaching Materials

Appendix G
UTI Guidelines

Appendix H
Other Uses for Intermittent Catheterization

Appendix I
Obtaining Medical Supplies

Appendix J
Patient Resources

Appendix K
 Voiding Diary

Appendix L
Answers to Self-Assessment

Appendix M
Universal Sizes and Conversions

Glossary of Terms
Appendix A

Anatomy

Male Urinary System

Female Urinary System
Appendix A

Insertion Tips

Male Insertion

In men, the urethra is 6 to 8 inches long and shaped like the letter “S.” Inserting the catheter becomes much easier if you lift your penis up towards the stomach - this way the S is straightened out.

A coudé tip catheter simply has a slightly curved tip which may be helpful for some patients who have had difficulty passing a straight tip. The curved tip helps to bypass the prostate and/or strictures more easily. A coudé tip catheter should always be inserted with the tip facing upward.
An important consideration when educating female patients is to ensure they can identify the difference between the urethral and vaginal openings. The use of an adjustable mirror can assist the patient with familiarization of anatomy. If you are catheterizing a female patient in bed you may also find it helpful to place a pillow under her pelvis to assist in creating the correct angle for easier catheter insertion.
Some suggested alternative positions for catheterizing:

**Males**
- Sitting in wheelchair using a collection bag or an extender draining into toilet
- Sitting in a chair using a collection bag or an extender draining into toilet
- Lying down using a collection bag or drainage receptacle

**Females**
- Sitting in chair or wheelchair draining into a collection bag or draining into toilet using a longer catheter
- Lying down with pillow under pelvis
- Lying down frog leg with leg spreader
- Lying down using collection bag
- Standing with one leg up on the toilet seat
- Squatting against a wall
- Lying down using a collection bag or drainage receptacle
# Troubleshooting

This chart mentions some of the common problems that may arise, causes and suggested reactions. Some additional supplies may be needed for troubleshooting scenarios.

<table>
<thead>
<tr>
<th>Difficulty inserting and/or removing catheter</th>
<th>Patient is too tense</th>
<th>Catheter diameter is too large</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Practice relaxation techniques</td>
<td>• Try smaller catheter FR size</td>
<td></td>
</tr>
<tr>
<td>• Apply gentle pressure while patient coughs or takes deep breath</td>
<td>• Try another type/brand of catheter</td>
<td></td>
</tr>
<tr>
<td>• Apply xylocaine jelly with syringe, wait 3-5 minutes, retry</td>
<td>• Try using a hydrophilic catheter instead of a conventional catheter with lubricating gel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use more lubricant</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No urine flows</th>
<th>Inadequate advancement of catheter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positioning</td>
<td>• Reposition: reangle penis or place pillow beneath female pelvis</td>
</tr>
<tr>
<td>Sediment, mucus, clotting, stones</td>
<td>• Bladder may need irrigation or aspiration</td>
</tr>
<tr>
<td>False passage</td>
<td>• Contact healthcare provider</td>
</tr>
<tr>
<td>Catheter was inserted into the vagina</td>
<td>• Leave catheter in place (so patient may avoid improper insertion a second time), while inserting a new clean catheter into urethra</td>
</tr>
</tbody>
</table>
### Leaking

<table>
<thead>
<tr>
<th>Condition</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinary Tract Infection</td>
<td>• Antibiotics</td>
</tr>
<tr>
<td>Increased Volume</td>
<td>• Try one size larger catheter diameter</td>
</tr>
<tr>
<td>Overflow</td>
<td>• Increase catheterization frequency</td>
</tr>
<tr>
<td>Incomplete Emptying</td>
<td>• Increase catheterization frequency</td>
</tr>
<tr>
<td></td>
<td>• Ensure bladder is completely empty before withdrawal</td>
</tr>
<tr>
<td>Overactive Bladder</td>
<td>• Medication</td>
</tr>
<tr>
<td>Detrusor Inactivity</td>
<td>• Try coudé tip</td>
</tr>
<tr>
<td></td>
<td>• Apply suprapubic pressure</td>
</tr>
<tr>
<td></td>
<td>• Bend forward</td>
</tr>
</tbody>
</table>

### Blood on catheter

<table>
<thead>
<tr>
<th>Condition</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small amount can be normal</td>
<td>• Monitor</td>
</tr>
<tr>
<td>Tearing, sticking, scraping</td>
<td>• Contact healthcare provider</td>
</tr>
</tbody>
</table>

### Mitrofanoff Issues

<table>
<thead>
<tr>
<th>Condition</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel is not straight</td>
<td>• Insert catheter in corkscrew movement</td>
</tr>
<tr>
<td></td>
<td>• Try a smaller size catheter and apply more pressure</td>
</tr>
<tr>
<td>Mucus is plugging catheter</td>
<td>• Irrigate with the catheter in place</td>
</tr>
<tr>
<td>False passage</td>
<td>• Contact Healthcare Provider</td>
</tr>
<tr>
<td>Stenosis of channel</td>
<td>• Leave non-hydrophilic indwelling catheter in place x 1 week to dilate channel, then resume CIC</td>
</tr>
</tbody>
</table>
Appendix C

Complications of Neurological Conditions

Neurogenic Bladder is a disorder in which the bladder is neurologically impaired due to a systemic disorder, such as spinal cord injury, multiple sclerosis, spina bifida, Parkinson’s disease, diabetes, vitamin B12 deficiency, HIV, CVA, TBI.

The most common disorders are as follow:

**Urinary Retention**

The inability to empty urine from the bladder.

**Treatments**

The best treatment for this is intermittent catheterization. For prolonged retention an indwelling foley catheter may be used, but only for short intervals. Prolonged catheter placement may cause urinary tract infection or erosions and fistula formation of the urethra. A suprapubic tube placement is also an option to deal with retention for those patients with limited hand dexterity and limited caregiver availability. However, this catheter requires a surgical procedure for placement. Once in place it needs to be changed every 4 to 6 weeks. There are problems with clogging of the catheter, due to sediment, bladder stone formation or abnormal cell growth.

**Neurogenic Detrusor Overactivity**

The incontinence of urine, via a bladder spasm.

**Treatments**

Typically this can be controlled by anticholinergic medications, to decrease the spasms and increase the bladder capacity. However, this has been known to be refractory to medications and may need to be treated with intra-detrusor/trigonal injections of Botox injection.
Stress Incontinence

This may occur in spinal injury that effects the lower motor neurons. Basically the sphincter muscle that helps hold urine in the bladder, no longer works properly. So a patient may have incontinence with transfers, sneezing, coughing or bending.

Treatments

It may be helpful for patients to CIC just prior to physical activity/exertion such as sports participation to avoid stress incontinence. This is commonly treated with bulking agents, slings or artificial sphincters.

Detrusor Sphincter Dysynergia

A disorder in which the bladder contracts and the sphincter contracts at the same time. Commonly occurs in SCI and MS patients. Over a prolong period, this may cause break down of the bladder walls ability to expand and contract. It may also lead to vesico-ureteral reflux.

Treatments

Patients are typically started on an Alpha blocker, to help relax the sphincter. If this fails then Botox injections to the sphincter or a sphincterotomy may be performed, however, these procedures commonly cause incontinence and are almost always done on males.

Vesico-ureteral Reflux

A disorder in which urine is forced back up into the ureters and into the kidneys. This may cause hydronephrosis or hydroureter. Prolonged occurrence may cause infections and scarring of the kidneys, which in turn may cause decreased function of the kidneys.

Treatments

Every effort is made to stop this from occurring, medication therapy and Botox injections may be used, but when these efforts fail, then ureteral re-implantation may need to be done or a urinary diversion is done. Both of which are major surgeries.
Urinary Tract Infection (UTI)

Is a common occurrence for patients with neurogenic bladders. There are many definitions for a UTI, which may include elevated while cells, > 50,000 bacteria, the appearance of blood in the urine, burning sensation or systemic symptoms such as fever, chills or Flu like symptoms.

Treatments

Asymptomatic UTIs in patients on CIC should not be treated. Colonization of bacteria in the bladder may be considered normal in many patients on CIC.

Typical treatments usually involve antibiotic therapy or agents that decrease the burning sensation. The best treatment in battling UTIs can be simply acknowledging colonization of bacteria. Though it may never cause any symptomatic issues, it still means bacteria is present in the bladder. Continue regular intermittent catheterizations, as prescribed by the provider. Deter from high volume retention and be sure to use proper technique when catheterizing.

Autonomic Dysreflexia

This commonly occurs in patients with a spinal cord injury of T6 or higher. Basically it is the body’s response to a potentially harmful stimulus, such as: distended bladder, impaction of stool, tight fitting clothing or a sore that may be occurring on the skin. Common signs are: profuse sweating, elevated BP, pressure behind the eyes, flashes of lights, severe headaches and elevated blood sugars.

Treatments

Elevating the patient’s head or sitting patient up should be first course of action, then find the source of the harmful stimulus. Depending on source, catheterization, disimpaction, loosening of clothing and attending to possible sore may be needed. If dysreflexia continue then the addition of a medication, usually Nifedipine is needed for treatment. If untreated this may lead to a stroke.
Appendix D

CIC Outside the Home

Travel

These are some helpful tips to share with your patient on catheterization while traveling.

- Plan ahead
- Be sure to pack an extra adequate supply
- Bring along a letter from healthcare provider explaining the necessity of carrying catheters
- Bring along a descriptive card of what the product is and its indications
- Bring extra prescription supplies and medications
- Keep healthcare provider’s contact information handy during all travels
- For school trips, notify trip leader or bring a letter explaining need to catheterize
- Wear medical alert bracelet at all times (as appropriate)

School

Patients of school age are often separated from their family’s care for a long portion of the day, during which they will likely need to catheterize. It is helpful to educate the patient and their caregiver on some important considerations to help them be prepared.

- Ensure child has an extra change of clothes available at all times when at school
- Regular catheterization schedule should be adhered to even during school day. Work with staff supervision to develop a convenient time schedule
- Discuss with school staff regarding which supplies will be provided and which will be necessary to bring from home
- Where age appropriate, inform other key adults such as teachers, athletic coaches and school nurses about the child’s catheterization routine so they may offer active support and help if needed
- Preserve normalcy, catheterization should not prevent the child from participating in outings or school trips
Appendix E

Nutritional Advice

Though it is always good to reiterate the importance of making healthy nutritional choices, the following considerations are especially important for patients practicing CIC.

Water
Many patients don’t drink enough water because it increases the frequency of need to catheterize. An adequate intake of fresh, clean water each day is imperative to keep the urinary system functioning at its best. 1500 - 2000mL of fluids daily are recommended for adults and children over the age of six. 1000 - 1500mL are recommended for children ages one to six years of age. Urine that is clear or light yellow in color is representative of adequate fluid intake.

Fresh fruits, vegetables and fiber
A diet high in fiber helps to promote a healthy digestive system. It helps rid the body of waste and prevents constipation, which can be a common complaint, especially for less active patients.

Medications as prescribed by physician
Sometimes patients discontinue a medication when symptoms disappear, though infection may not yet be cleared. Some medications may indicate the need for certain dietary changes. Advise patient there are other forms of medication available if needed (liquids, patches, tablets, etc.).

Cranberry pills/ Vitamin C/ Probiotics
May be beneficial to some patients. Consult a healthcare provider to discuss the best options for your patient.

Bladder irritants
Be aware of increased symptomology associated with consumption of caffeine, alcohol, chocolate, carbonation, spicy and acidic foods.

Diuretics
Caffeine and alcohol can have a diuretic effect on the body and increase urine production. This may increase the frequency of catheterizations needed.

Bowel management
Reinforce the importance of maintaining the prescribed bowel program to avoid constipation, fecal impaction and associated increased risk of urinary tract infections.
Patient Teaching Materials

There are many educational materials available to assist clinicians in educating patients and their families/caregivers on CIC.

In addition to the suggestions listed below, see Appendix J: Patient Resources for additional websites, books and movies. Additionally, suggested adaptive devices for spinal cord injured patients performing CIC are listed within the Teaching section of this book.

Nickie® Medical Training Doll
Anatomical doll used to train children with special medical needs

Life/form® Anatomy Models
Model of anatomy to practice proper insertion of a urinary catheter
www.simulaids.com

Asta-Cath™ Female Catheter Guide
Device designed to assist females in locating the urethral meatus
www.brucemedical.com

Manufacturer and Distributor Produced Literature
Some catheter manufacturers and distributors have educational materials available online or by request to support clinicians and patient educators.
www.lofric.us     us.coloplast.com     rocm.com     crbard.com     hollister.com     symbiusmedical.com
nationalrehab.com/urological     ccsmed.com

Spina Bifida University
Website offering educational sessions for clinicians and caregivers on many topics related to Spina Bifida
www.sbuniversity.org

Professional Teaching Materials

There are also educational materials available for clinicians who educate or lecture on topics concerning conditions relating to bladder function.
LoFric Academy

LoFric Academy is a global online system from where one can quickly and easily download or create presentations about many aspects of urinary disorders. It contains over 2060 pages divided in 286 chapters in several different languages. The material available in LoFric Academy is developed by nurses for nurses who, in most cases, will use it to educate more nurses. However, it could of course be used for a wider target group depending on what you say when showing the pictures.

Some things you can do in LoFric Academy system:

- Download presentation on topics concerning conditions relating to the bladder function
- Create your own presentations by using material available in the system
- Create your own pages
- For your assistance you have unique File Manager filled with images and illustrations related to topics of urinary disorders
- Download animations that relate to topics of urinary disorders

Available for use on iPad

www.lofricacademy.com
Urinary Tract Infections (UTIs)

Your patient could have a UTI with or without experiencing symptoms.

**Symptoms could include:**

*Fever/chills*
Flu-like symptoms
Increased frequency of urination
*Back pain/flank pain*
Dysuria
Hematuria
Vomiting
Incontinence
Cloudy urine

Fatigue
*Mental status change* *(ie. irritability, lethargy)*
Presence or increased sediment in urine
Increased spasticity
*Autonomic dysreflexia*
Pus in urine
Bladder pressure/pain
Foul smell

Symptomatic UTIs are often treated with antibiotics. Generally, asymptomatic infections are not treated in patients on CIC. Contact your healthcare provider for specific recommendations.

**Prevention**

- Practice good hygiene
  - Clean hands, genitals and stoma areas thoroughly
    - **Females:** wipe and cleanse front to back
    - **Males:** if applicable, retract foreskin
- Use proper and clean supplies
- Prevent constipation
  See Appendix E: Nutritional Advice for dietary recommendations
- Dietary supplements
  See Appendix E: Nutritional Advice for supplement recommendations
Other Uses for Intermittent Catheterization

There are a few scenarios for which intermittent catheterization is used for a purpose other than emptying the bladder.

Bladder Instillations

Some conditions, (such as Interstitial Cystitis, bladder cancer, etc.) may require medications or other therapeutic solutions to be injected directly into the bladder. In these cases, the solution is injected into a well lubricated catheter and up into the bladder. The liquid is held in the bladder for a period of a few minutes to a few hours, depending on the physician’s instructions, then drained via normal urination or catheterization when needed. Instillations may be performed in the physician’s office or at home depending on the physician’s orders.

Bladder irrigation

Bladder irrigation may be necessary to flush out mucus or sediment following diversion or bladder augmentation procedures. The catheter is inserted into the bladder, the bladder is drained, fluids are instilled and then drained or aspirated.

Urethral Dilatation

Some patients can experience an abnormal narrowing of the urethral passageway, due to strictures and inflammation as a result of trauma or surgery. If the physician prescribes urethral dilatation as a remedy, the patient or caregiver will need to insert catheters into the urethra beginning with a small diameter size and eventually working up to larger diameters as the urethra is stretched and the narrowing subsides. It is important to remind the patient of the importance of following the physician’s orders very closely if dilation is prescribed.
Obtaining Medical Supplies

It can sometimes be challenging for a patient to receive the correct medical supplies necessary for successful CIC and as prescribed by the healthcare provider. It is your role to provide assistance and ensure they are able to obtain the correct supplies during each of your follow-up sessions.

**In 2008, Medicare coverage increased to allow up to 200 catheters per month. Coverage for Medicaid and commercial/private insurance providers may vary and it is important to educate the patient that they should discuss their catheter coverage policy with their insurance provider. Advise the patient to contact you if they have trouble receiving the correct supplies as prescribed.**

This is a general outline of the steps necessary for the patient to receive their supplies:

1. **Prescription form completed by healthcare provider**
   Catheters are a prescription-only product. (Sample on following page). Rx form must always include the patient's diagnosis, catheter size (FR size and length), and prescribed frequency (to include number per month) and duration.

2. **Prescription sent to supplier/pharmacy or given to patient**
   Multiple suppliers are available. These can be restricted due to insurance benefits or provider contracts with supply companies. Discuss available options for receiving catheters and supplies.

3. **A Letter of Medical Necessity (LMN) completed and included with prescription**
   Insurance carriers may require an LMN for a patient to receive certain products or catheter types as prescribed. (Sample on following pages)

4. **A minimum of 5-7 days’ supply of catheters given to patient on discharge**
   It is important the patient is given enough supplies to use until prescription is filled by the supplier.

5. **Importance of proactive management of supplies reinforced to the patient**
   Explain the necessity of reordering supplies before stock is completely out.

6. **Indigent programs are available, patient should be instructed to contact their healthcare provider for assistance.**
Appendix I

Sample Rx form

It is important to fill out the Rx form completely and thoroughly. Below is an example of an Rx form for intermittent catheters. The form will vary from provider to provider, but with all forms ensure you have included the catheter size, the diagnosis code and the frequency of catheterization being prescribed for the patient. If the patient is being prescribed sterile insertion supplies, you must also submit documentation supporting the medical necessity. If the patient is prescribed a coudé tip, you must submit chart notes stating they are not able to pass a straight catheter.

CABIC 55
Appendix I

Sample Letter of Medical Necessity

A Letter of Medical Necessity (LMN) is additional documentation required when a patient requires more catheters than typically covered by their insurance plan or for certain catheter types or supplies. The next page should provide more clarification on when this documentation is required.

Date

Patient Name (Date of birth)

Insurance plan name

ID numbers

To whom it may concern,

In the body of letter you should include:

• Patient’s diagnosis and history
• Patient’s level of understanding (if any developmental delays), patient’s level of sensation and if pain was experienced when catheterized previously
• History of labs (blood and urine, if has documented UTIs, x-rays and/or ultrasounds and dates)
• Types of catheters that have been used in the past if other types have been tried
• Patient’s response to teaching and ability to catheterize with the chosen catheter
• Doctor’s plan for catheterizing, including frequency, amount, catheter size, tip, length, number prescribed per day and month and number of refills
• Follow-Up plan and next appointments

Thank you,

Signature

Insert your name

* * Ensure your facility and contact information is available in some location on the page
Appendix I

Medicare Urological Utilization Guidelines

<table>
<thead>
<tr>
<th>General Description</th>
<th>HCPCS</th>
<th>Medicare Quantity Allowance &amp; Required Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intermittent urinary catheter, straight tip</td>
<td>A4351</td>
<td>200 per month</td>
</tr>
<tr>
<td>Intermittent urinary catheter, coudé (curved) tip</td>
<td>A4352</td>
<td>200 per month. Documentation stating the patient has urethral strictures or another diagnosis resulting in the inability to pass a straight tip catheter is required to justify medical necessity of coudé.</td>
</tr>
<tr>
<td>Intermittent urinary catheter, with insertion supplies</td>
<td>A4353</td>
<td>See Guidelines below.</td>
</tr>
</tbody>
</table>

*Medicare requires chart notes to reflect the same quantity of catheters needed as the quantity prescribed in the Rx. Sending chart notes with every Rx will streamline processing and minimize requests for additional documentation.

A4353 Guidelines

Medicare also covers Closed-System Intermittent Catheters and Intermittent Catheters with Insertion Kits if the beneficiary has permanent urinary incontinence and has at least one of the following criteria documented in their medical record:

1. Patient resides in nursing home
2. Patient is immunosuppressed
3. Patient has radiologically documented vesico-ureteral reflux
4. Patient is a spinal cord injured pregnant female
5. The patient has had distinct, recurrent urinary tract infections, while on a program of sterile intermittent catheterization with A4351/A4352 and sterile lubricant A4332, twice within the 12 months prior to the initiation of sterile intermittent catheter kits.

Urinary Tract Infection (UTI) Documentation Requirements

Medicare requires urine culture with greater than 10,000 colony forming units of a urinary pathogen and one or more of the following:

1. Fever (measured orally) greater than 100.4 F
2. Pyuria; white blood cell count greater 5 per high power field (HPF)
3. Change in urinary urgency, frequency, or incontinence
4. Appearance/increase in dysreflexia (sweating, slow heart rate, elevated blood pressure)
5. Physical signs of prostatitis, epididymitis, orchitis
6. Systemic leukocytosis
7. Increased muscle spasms
Appendix J

Patient Resources

Web Sites

pottymd.com
A Website with information, books and products to support bladder health

urologyhealth.org
Patient Health Information, Urology Health Information

aboutkidshealth.ca
Educational Website created by The Hospital for Sick Children in Toronto, Canada

fruitsandveggiesmorematters.org
Nutrition information and tools to motivate your child to eat a balanced diet

liferollson.org
Life Rolls On, a foundation helping the SCI community to enjoy adapted sports

nlm.nih.gov/medlineplus/kidneysandurinarysystem.html
Anatomy and information about the urinary system

asia-spinalinjury.org
American Spinal Injury Association

pva.org
Paralyzed Veterans of America

urologyhealth.org
American Urological Association

christopherreeve.org
The Dana and Christopher Reeve Foundation

seattlechildrens.org
A 20-minute slideshow with audio to watch with your child if they are 5 years old or older. It covers the anatomy and physiology of bladder health, how to deal with urinary tract infections, how often children should urinate and nighttime wetting (enuresis)

depts.washington.edu/healthtr
A resource for adolescents who have special healthcare needs, chronic illness, or physical or developmental disabilities
Appendix J

Web Sites (continued)

sbaa.org
Spina Bifida Association of America

uspharmacist.com
Urological Pharmaceutical Information

ncbi.nlm.nih.gov/pubmedhealth
Pubmed

nlm.nih.gov/medlineplus
MedlinePlus

merckmanuals.com/professional/genitourinary_disorders
Merck Manual on urinary disorders and complications

Medical Identification Resources

medicalert.org
1-800-432-5378
Medical identification jewelry, which also includes enrollment in a 24-hour emergency response center

beadin-beagle.com
Attractive jewelry options, with free engraving of important medical information

www.IDonme.com
1-801-495-1449
Inexpensive and child-friendly medical identification solutions

Books & Media

Another Way to Go
by Marlene Lutkenkoff
Story about a young child with Spina Bifida who realizes he uses a different method of emptying the bladder than the other children upon entering school. The child is reassured that it is ok for him to be different.

Children with Spina Bifida: A Parent’s Guide
by Marlene Lutkenkoff
A complete introductory guide for parents, filled with up-to-date information and empowering emotional support.
Appendix J

Children with Spina Bifida: A Parent’s Guide
by Marlene Lutkenkoff
A complete introductory guide for parents, filled with up-to-date information and empowering emotional support.

How to Talk So Kids Will Listen & Listen So Kids Will Talk
by Adele Faber and Elaine Mazlish
Effective methods for getting your child to cooperate

Mommy, I Have to Go Potty
by Jan Faull
How to potty train your child

Yes You Can
by Stephen P. Burns MD and Margaret C. Hammond MD
A guide to self-care for persons with a spinal cord injury

Unplugging the Power Struggles
by Jan Faull
Short, easy-to-read book with practical information on resolving emotional battles with children

Overcoming Bladder & Bowel Problems in Children
by D. Preston Smith MD, PottyMD.com
How to cope with wetting problems that happen after potty training

Parenting Children with Health Issues and Special Needs
by Foster W. Cline and Lisa C. Greene
Skills for parents who need to help a child deal with health or medical issues

Right Under My Nose
by Claire Austin MPhil and Stacey Mizokawa PhD
Book written to help children with Spina Bifida understand their condition and enrich their lives

Shit Happens - Bowel & Bladder Disorders
by Madeleine Stenius
Simple tips and remedies to get your bowels and bladder working again after a spinal cord injury

Jesse’s Story
by Zzyzx Films
Full-length documentary on Jesse Billauer about overcoming adversity after spinal cord injury

The Ostomy Book
by Barbara Dorr Mullen & Kerry Anne McGinn, RN, BSN, OCN
Discusses every aspect of an ostomy and living comfortably after undergoing this procedure
## Voiding Diary

**Physician Name:** ___________________________  **Date Started:** __________

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Urgency</th>
<th>Leakage</th>
<th>Pad Change (Y or N)</th>
<th>Volume Voided</th>
<th>Volume Cathed</th>
<th>Unsuccessful Attempts</th>
<th>Volume Consumed</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

Please rate each urgency and leakage using the scale below.

None = 0  Mild = 1  Moderate = 5  Severe = 10

**Notes:**
Appendix L

Patient-Assessment Answer Key

1. CIC stands for “Clean Intermittent Catheterization.”
   CIC is a safe and effective alternative for emptying the bladder. It involves the intermittent introduction of a special tube (urinary catheter) into the bladder to drain its contents. The catheter is disposed of upon complete emptying, and a new catheter is used for each catheterization.

2. Any 3 of the following:
   - Spinal Cord Injury (SCI)
   - Spina Bifida (SB)
   - Multiple Sclerosis (MS)
   - Traumatic Brain Injury (TBI)
   - Cerebrovascular Accident (Stroke/CVA)
   - Idiopathic bladder
   - Prune Belly Syndrome
   - Benign Prostatic Hyperplasia (BPH)

3. Generally every 4 hours (varies 3-6) or a post-void volume of no more than 400mL (children last will have a lower post-void volume).

4. Patient’s first and last name, date of birth, diagnosis, catheter size (FR size and length), number of catheters per month and number of monthly refills.

5. Insurance requirements/restrictions, prescribed brand is carried, method of distribution (pick-up v. drop-ship).

6. Diagnosis, history of condition, failed treatments.
7. See chart for possible answers

<table>
<thead>
<tr>
<th>Difficulty inserting and/or removing catheter</th>
<th>No urine flows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient is too tense</td>
<td>Inadequate advancement of catheter</td>
</tr>
<tr>
<td>• Practice relaxation techniques</td>
<td>• Advance catheter further into the bladder</td>
</tr>
<tr>
<td>• Apply gentle pressure while patient coughs or takes deep breath</td>
<td></td>
</tr>
<tr>
<td>• Apply xylocaine jelly with syringe, wait 3-5 minutes, retry</td>
<td></td>
</tr>
<tr>
<td>Catheter diameter is too large</td>
<td>Positioning</td>
</tr>
<tr>
<td>• Try a smaller catheter diameter (FR size)</td>
<td>• Reposition: reangle penis or place pillow beneath female pelvis</td>
</tr>
<tr>
<td>Catheter is sticking to urethral surface</td>
<td>Sediment, mucus, clotting, stones</td>
</tr>
<tr>
<td>• Try another type/brand of catheter</td>
<td>• Bladder may need irrigation or aspiration</td>
</tr>
<tr>
<td>• Try using a hydrophilic catheter instead of a conventional catheter with lubricating gel</td>
<td></td>
</tr>
<tr>
<td>• Use more lubricant</td>
<td>False passage</td>
</tr>
<tr>
<td></td>
<td>• Contact healthcare provider</td>
</tr>
<tr>
<td></td>
<td>Catheter was inserted into the vagina</td>
</tr>
<tr>
<td></td>
<td>• Remove catheter and insert new clean catheter into urethra</td>
</tr>
</tbody>
</table>
### Leaking

<table>
<thead>
<tr>
<th>Issue</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinary Tract Infection</td>
<td>• Antibiotics</td>
</tr>
<tr>
<td>Increased Volume</td>
<td>• Try one size larger catheter diameter</td>
</tr>
<tr>
<td>Overflow</td>
<td>• Increase catheterization frequency</td>
</tr>
<tr>
<td>Incomplete Emptying</td>
<td>• Increase catheterization frequency, Ensure bladder is completely empty before withdrawal</td>
</tr>
<tr>
<td>Overactive Bladder</td>
<td>• Medication</td>
</tr>
<tr>
<td>Detrusor Inactivity</td>
<td>• Try coudé tip, Apply suprapubic pressure, Bend forward</td>
</tr>
</tbody>
</table>

### Blood on catheter

<table>
<thead>
<tr>
<th>Issue</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small amount can be normal</td>
<td>• Monitor</td>
</tr>
<tr>
<td>Tearing, sticking, scraping</td>
<td>• Contact healthcare provider</td>
</tr>
</tbody>
</table>

### Mitrofanoff Issues

<table>
<thead>
<tr>
<th>Issue</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel is not straight</td>
<td>• Insert catheter in corkscrew movement, Try a smaller size catheter and apply more pressure</td>
</tr>
<tr>
<td>Mucus is plugging catheter</td>
<td>• Irrigate with the catheter in place</td>
</tr>
</tbody>
</table>
Appendix L

8. Any 3 of the following
   - Fever
   - Increased frequency of urination
   - Pain/burning sensation
   - Dysuria
   - Bladder pressure/pain
   - Fatigue
   - Foul smell
   - Incontinence
   - Change to normal routine

9. Psychological, Emotional, Physical, Social, Environmental/Economical

10. Advance catheter further into the bladder
    - Reposition: reangle penis or place pillow beneath female pelvis
    - Bladder may need irrigation or aspiration
    - Contact healthcare provider

11. Blood pressure monitoring: Autonomic Dysreflexia

12. 10FR, 16” length

13. Urinary tract system:
    - Consists of two kidneys, two ureters, bladder, urethra.
    - Kidneys filter blood of waste products, creating urine.
    - Urine travels down ureters to bladder, where it is stored until it is time to void
    - When bladder enough capacity, it signals the detrusor muscle to contract and the sphincter muscle to relax, allowing the urine to travel down the urethra and drain into the toilet or drainage receptacle
Universal Sizes and Conversions

The color of the funnel on a urinary catheter usually indicates the diameter of the catheter tube. A universal color coding system is generally followed by most manufacturers and may be helpful for easy size recognition.

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 FR</td>
<td></td>
</tr>
<tr>
<td>8 FR</td>
<td></td>
</tr>
<tr>
<td>10 FR</td>
<td></td>
</tr>
<tr>
<td>12 FR</td>
<td></td>
</tr>
<tr>
<td>14 FR</td>
<td></td>
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<tr>
<td>16 FR</td>
<td></td>
</tr>
<tr>
<td>18 FR</td>
<td></td>
</tr>
<tr>
<td>20 FR</td>
<td></td>
</tr>
<tr>
<td>22 FR</td>
<td></td>
</tr>
</tbody>
</table>

Some Helpful Conversions

FR = French Size (diameter of tube)
* May also be referred to as CH (Cherrier) by some European manufacturers. 1FR = 1CH

1 FR = 1/3mm

1 inch = 2.54cm

1 oz = 29.57mL
Appendices: Glossary

* See Appendix C for thorough definitions of the most common causes of Neurogenic Bladder.

**Antagonist**
An agent that acts in physiological opposition.

**Antibodies**
Any of numerous protein molecules produced by the B-cells as a primary immune defense.

**Anticholinergic**
Inhibiting or blocking the physiological action of acetylcholine at a receptor site.

**Acontractile bladder**
When the bladder muscle does not have the strength to empty the bladder completely.

**Atonic bladder**
A large dilated (flacid) and non-emptying bladder.

**Augmentation**
The act or process of making larger.

**Autonomic Dysreflexia**
See Appendix C for full definition.

**Anti-spasmodic**
Relieving or preventing spasms, especially of smooth muscle.

**Bacteriuria**
The presence of bacteria in urine.

**Bile**
A bitter, alkaline, brownish-yellow or greenish-yellow fluid that is secreted by the liver, stored in the gallbladder, and discharged into the duodenum and aids in the emulsification, digestion and absorption of fats.

**Bladder exstrophy**
A congenital birth defect where part of the bladder is formed outside the body.
CIC
(Clean Intermittent Catheterization) Introduction of a tube, called a catheter, into the bladder to drain its contents.

Dexterity
Skill and ease in using the hands.

Detrusor-overactivity
(detrusor instability, hyperactive detrusor, hyperreflexia) Involuntary detrusor contractions can be observed during the filling or inhibition phase (trying to hold a certain volume in the bladder) of a urodynamic examination. This does not provide any indication of the condition’s cause. Detrusor overactivity incontinence is urine leakage that occurs simultaneously with an involuntary detrusor contraction.

Detrusor sphincter dysynergia
Occurs when coordination of the external sphincter/pelvis and the bladder doesn’t work, when the sphincter and the detrusor muscle both contract during micturition.

Encrustation
Development of a crust or hard coating.

Enuresis
Involuntary passing of urine after the age at which a child with no neurological disease or congenital malformation should normally have established bladder control. Secondary enuresis is when a child has begun to wet themself after a dry period of at least six months.

Epididymitis
Inflammation of the coiled tube (epididymis) located at the back of the testicle that carries and stores sperm.

False Passage
An unnatural opening from the urethra into surrounding tissue potentially caused from improper introduction of catheter or instrument.

Fistula
Permanent abnormal passageway between two organs or between an organ and the outside of the body.
Hematuria
Blood in the urine.

Hydronephrosis
Abnormal enlargement of a kidney, may occur secondary to acute ureteral obstruction (kidney stone) or chronic kidney disease.

Hydrophilic catheter
A catheter that uses water for lubrication instead of lubricating jelly.

Hypotonic bladder
Having a lesser degree of tension also called under active bladder.

Gland
A cell, a group of cells or an organ that produces a secretion for use elsewhere in the body or in a body cavity or for elimination from the body.

Hormone
A substance, usually a peptide or steroid, produced by one tissue and conveyed by the bloodstream to another to affect physiological activity, such as growth or metabolism.

Hydroureter
Distention of the ureter with urine, due to blockage from any cause.

Idiopathic
Of unknown causation.

Iatrogenic
Induced inadvertently by the medical treatment or procedures or activity of a physician.

Inhibitor
An agent that slows or interferes with a chemical reaction.

Insidious
Developing so gradually as to be well established before becoming apparent.
Interstitial Cystitis
A chronic inflammatory condition of the bladder caused by the breakdown of the bladder’s protective surface layer (glycoaminoglycans) allowing harmful substances from urine to enter and irritate the bladder wall.

Kidney Stones
The presence of calculi in the kidney or collecting system.

Microhematuria
Small amounts of blood in the urine.

Micturition
The passage of urine, urination.

Mitrofanoff
A surgically created tube inside the body made of tissues from the appendix or intestines leading from the bladder to a small opening in the abdomen (stoma). A mitrofanoff is used to empty the bladder through the abdomen with a catheter.
* May sometimes be referred to as a Continent Urinary Diversion.

Multiple Sclerosis (MS)
A potentially debilitating disease where the body’s immune system eats away at the protective sheath covering the nerves, interfering with communication between the brain and the rest of the body.

Narcosis
A condition of deep stupor or unconsciousness produced by a drug or other chemical substance.

Neurogenic
Arising from or caused by the nervous system.

Nocturia
Waking up once or more at night to urinate.

Nocturnal Enuresis
The involuntary passing of urine while sleeping.
Nocturnal Polyuria
Exists when an increased urine production occurs at night (not including the last micturition before going to bed, but including the first micturition after waking up.) Nocturnal urine production should normally be less than 20-35% (depending on age) of the daily urine quantity.

Osmolality
The concentration of osmotically active particles in solution expressed in terms of osmoles of solute per kilogram of solvent.

Osmolarity
The concentration of osmotically active particles expressed in terms of osmoles of solute per liter of solution.

Overflow
Involuntary leakage of urine resulting from an overly full bladder. Often a result of the lack of urge to urinate when necessary.

Peristalsis
The wormlike movement by which the alimentary canal or other tubular organs provided with both longitudinal and circular muscle fibres propel their contents.

Prophylactic
Preventive measure or medication.

Polyneuropathy
A disease process involving a number of peripheral nerves.

Polyuria
Production of more than 2.8 liters of urine per 24 hours (>40 ml per kg body weight).

Prolapse
The falling down or slipping out of place of an organ or part, such as the uterus.

Prostatitus
Inflammation of the prostate gland.
Prune Belly Syndrome
Birth defect with symptoms including wrinkly skin on abdomen, partial or complete lack of abdominal muscles, undescended testicles, urinary tract abnormalities.

Pyelonephritis/pyelonephritic
Infection or inflammation of the kidney and its pelvis.

Pyuria
Pus in the urine.

Relapse
The recurrence of a symptom that had disappeared.

Sepsis
Presence of organisms in the blood.

Sling
A supporting bandage or suspensory device.

Sphincter
A ring like muscle that normally maintains constriction of a body passage or orifice and that relaxes as required by normal physiological functioning.

Spina Bifida
A congenital abnormality in which the spinal cord is malformed and may protrude through the vertebral column causing neurological impairment and decreased mobility below the level of the lesion.

Spinal Cord Injury (SCI)
Damage to any part of the spinal cord which often causes decrease or loss of sensation and bodily function below the level of the injury.

Stenosis
A condition in which the urethra, or other tube draining the bladder, is blocked.

Stoma
A small opening in the abdomen created for a catheter to enter the body for bladder drainage (also see Mitrofanoff).
Stress incontinence
The symptom is involuntary urine leakage during physical stress, coughing or sneezing. Urodynamic stress incontinence: urine incontinence during an increase in bladder pressure, without simultaneous detrusor contraction.
   Level I: Leakage when coughing, sneezing and jumping.
   Level II: Leakage when walking.
   Level III: Leakage during minimal stress and when sitting still.

Stricture
A narrowing, especially of a tube or canal, due to scar tissue or tumor.

Suprapubic
Anatomy - above the pubic bone.

Uraemia
A toxic condition resulting from kidney disease in which there is retention in the bloodstream of waste products normally excreted in the urine. Also called azotemia.

Urine culture
Procedure to identify the number and type of bacterias present in a urine sample.

Urgency
A sudden urination urge that is difficult to hold back.

Urge incontinence
Involuntary urine leakage that occurs at the same time as or directly after a sudden and strong feeling of the urge to urinate.

Urine incontinence
Involuntary passing of urine that may create a social or hygienic problem.

Urine retention
Inability to empty the bladder.
**Urodynamic examination**
Collective name for a series of examinations to register pressure and flow conditions in the urinary tract. It mainly focuses on the lower urinary tract, i.e. the bladder and the urethra.

**Urolethium**
Mucous membrane of the bladder.

**Valve**
A membranous structure in a hollow organ or passage, as in an artery or vein, that folds or closes to prevent the return flow of the body fluid passing through it.

**Voiding**
Emptying of the bladder.

**Yeast infection**
Infection of the vagina caused by the Candida albicans bacteria characterized by itching, burning, soreness, pain and/or white discharge.