CCHCS Care Guide: Foreign Body Ingestion/Insertion

SUMMARY | DECISION SUPPORT | PATIENT EDUCATION/SELF MANAGEMENT

GOALS

- Ensure that patients with Foreign Body Ingestion/Insertion (FBI) are managed at the appropriate level of care. When asymptomatic, most patients can be observed at the institution.
- Consider the risk/benefit of repeated imaging in asymptomatic patients.
- In most cases, surgery should be avoided as many of these patients engage in self-harm behaviors and repeatedly open abdominal wounds.
- Identify patients with repeated FBI and follow closely with a multidisciplinary approach.

ALERTS

- Most of our patients who ingest foreign bodies (FB) do it intentionally and repeatedly, and the severity of ingesting behavior often increases.
- Disk or button batteries lodged in the esophagus can rapidly cause liquefaction necrosis and perforation, and need emergent removal.
- Inserted objects (i.e., in rectum, vagina, urethra, nose, ears, and/or subcutaneous tissues) may perforate and travel to distant sites.
- A multidisciplinary approach working with Mental Health (MH) and custody should be used for repeated ingesters/inserters.

DIAGNOSTIC CRITERIA[1,5]

- Studies have shown that male sex, incarceration, and the presence of a psychiatric diagnosis are significant predictors of a recurrent FBI event. Once a FBI has occurred, the presence of any of these factors should prompt a heightened awareness for an impending recurrent event.
  - One study divided the behavior of intentional FBI into 4 distinct diagnostic subgroups: psychosis, personality disorder, pica, and malingering.
  - In the prison population particularly, FBI can result in transfer to an offsite location, sometimes for several days. Commonly when the FB has successfully passed (or been removed) without complications, this behavior may be repeated.
- In the **community**, FBIs are a common problem in Gastrointestinal (GI) clinical practice. The large majority of cases in community–dwelling patients with FBIs are accidental or food impactions and do not require intervention. Most FB pass spontaneously, although 10% to 20% of GI FBIs will require endoscopic intervention and 1% may require surgical intervention.
- In the **correctional setting**, patients commonly present with repeated intentional ingestion, often with multiple items ingested at the same time. Some studies have shown a higher rate of endoscopic intervention or surgery required in these patients, but the data is undoubtedly skewed as many patients with repeated ingestions may be managed conservatively at the institution.

EVALUATION

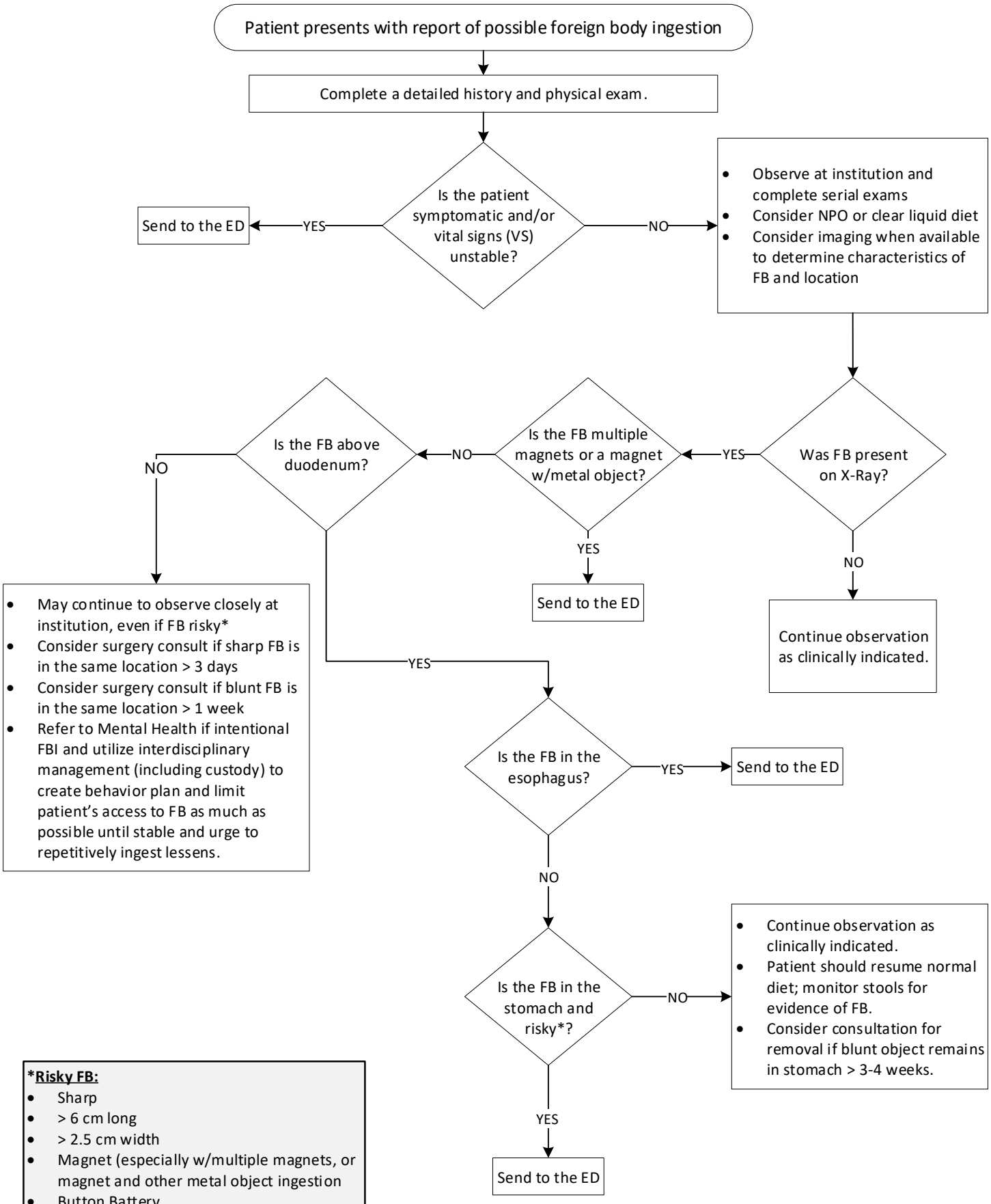
- **History and Physical:** Complete a detailed history and physical exam. Review MH history and use interdisciplinary team to co-manage patients with MH diagnosis or intentional ingestion. Look for signs of esophageal obstruction (inability to handle secretions) or perforation (signs of peritonitis on exam).
- **Diagnostic Tests/Procedures:** While radiographic localization and identification of FBs can be helpful in guiding management, there is also risk of repeated radiation exposure. Providers need to use clinical judgment based on the patient's presentation, history of prior ingestions, the patient's current housing location, and possible items available to the patient to ingest at time of reported ingestion.
  1. If radiographs are done typically a CXR (2 views: PA and Lateral) and/or abdominal X-Ray (2-3 views AP, lateral, and upright if concerned about free air) may be required to spatially locate FB. A neck X-Ray (2 views) may be needed if the patient is symptomatic in the neck.
     - **Radiopaque FBs:** paper clips, razor blades, wire, batteries, magnets, some aluminum objects may be visible if sufficiently dense;
     - **Potentially Radiolucent FBs:** aluminum (pieces of cans), plastic, wood, thorns/splinters, thin metal, food impactions may not been seen.
  2. Patients with abdominal pain, fever, GI bleeding, or other symptoms typically require computed tomography (CT) scanning to evaluate for the presence of bowel perforation or other pathology. In addition, if FB is known to be radiolucent and patient is symptomatic, a CT may be needed.
- **Determine type of FB:** Risky FB is anything lodged in the esophagus, batteries, magnets, sharp objects, objects > 6 cm long or > 2.5 cm wide.[5]
- **Consult with** MH and communicate any patient statements regarding the motivation for FBI.

TREATMENT OPTIONS/MONITORING (SEE PAGE 4)

Foreign Body/Patient Factors	Level of Care	Monitoring
Asymptomatic (imaging not done or is negative for FB)	Typically can manage at institution	• Observe, send to a higher level of care (HLOC) if symptoms develop. • Consider imaging when available.
FB in stomach	Manage at institution if asymptomatic (unless FB is risky– see page 4, then Emergency Department [ED])	• If risky FB in stomach (or esophagus), send to ED for attempt at removal • If not risky FB, may observe; FB will typically pass in 4-6 days. If FB remains in stomach > 3-4 weeks, consult GI provider. • Patient may eat a regular diet, send to a HLOC if symptoms develop.
FB is past the duodenum (even if item considered "risky")	Manage at institution if asymptomatic	• If sharp FB distal to duodenum, observe for passage. Consider surgical consultation if FB is in he same location for > 3 days. • If blunt FB, observe for passage, consider surgical consultation if object is in the same location for > 1 week. • Patient may eat a regular diet, send to a HLOC if symptoms develop.
FB lodged in esophagus	ED	• See timing of endoscopic retrieval on page 4.
Symptomatic or unstable	ED	• At any time if patient is unstable, transfer to a HLOC.

CCHCS Care Guide: Foreign Body Ingestion/Insertion

ALGORITHM FOREIGN BODY INGESTION



***Risky FB:**

- Sharp
- > 6 cm long
- > 2.5 cm width
- Magnet (especially w/multiple magnets, or magnet and other metal object ingestion
- Button Battery

CCHCS Care Guide: Foreign Body Ingestion/Insertion

ASSESSMENT

In the community, the majority of ingestions are accidental and isolated events. Most published guidelines for managing these patients are based on community experience. In the correctional setting, many of the patients presenting with FBI have ingested or inserted the FB intentionally and most have had prior episodes of FBI.

- The risk factors for intentional FBI are listed below. Patients with these characteristics are at high risk for recurrent intentional FBI.
  - Male sex • Incarceration • History of psychiatric disorder
- Self-injurious behavior is fairly common in patients with personality disorders, post-traumatic stress disorder, and some psychotic disorders. The patients often have histories of childhood deprivation, physical and/or sexual abuse.
- In patients with personality disorder, intentional FBI is a form of self-injury. These behaviors are usually non-suicidal but according to some authors[2] can be an expression of rage towards oneself and/or caregivers, and a way to force others to provide care.

HISTORY

A detailed history should be obtained for patients with FBI. Review the patient's MH history and use an interdisciplinary team to co-manage patients with a MH diagnosis or intentional ingestion/insertion. In a patient with intentional ingestion/insertion of a FB, it is important to consider five aspects of this behavior:

1. The body site through which the FB is introduced;
2. The type of FB involved;
3. The amount of FB ingested/inserted;
4. The motivation behind the behavior (e.g., malingering to be transferred to another institution or facility); and
5. Any identified psychiatric diagnoses.

- Being mindful of these five aspects allows a better understanding of the behavior and ensures efficient management of potential clinical consequences.
- Potential clinical complications and subsequent management vary greatly based on the type of ingested/inserted object as well as the body site through which it was introduced.
- While FB ingestion is more common in our patients than FB insertion, FB insertion (polyembolokoilamania) does occur. (See page 7 for FB Insertion information)
- **Chronic FBI:** A subset of FB ingesters and inserters, often with comorbid mental illness, become recurrent FB ingesters/inserters.
  - These patients frequently increase the number and complexity of FBs ingested/inserted and are at risk for recurrent surgeries and abdominal complications/scarring.
  - Interdisciplinary management of these patients is crucial. Discuss the patient with MH at huddles, Population Management sessions and closely monitor these patients.
  - Work with custody to monitor these patients.
  - An intensive interdisciplinary monitoring and prevention plan should be developed to reduce the risk of recurrent episodes.

PHYSICAL

The physical exam forms the basis for most FB evaluations. Complete a comprehensive physical exam of the patient ensuring to examine for the following:

- **Esophageal FB impaction** signs include dysphagia, choking, refusing to eat, hypersalivation, wheezing, signs of airway compromise and/or respiratory distress, drooling, and an inability to swallow liquids.
- **Peritonitis/perforation** signs include tender abdomen on palpation and rigidity or guarding on exam.
- **Intestinal obstruction** signs include abdominal tenderness and distention.
- **Complications of FBI** include perforation, obstruction, aortoesophageal fistula formation, and tracheoesophageal fistula formation

If none of the above is evident, the patient can typically be safely observed at the institution. Initial imaging can be considered, when available, to determine the characteristics and location of the FB. At any time, if the patient's exam or vital signs change, the patient should be sent to the community ED for further evaluation.

CCHCS Care Guide: Foreign Body Ingestion/Insertion

CLASSIFICATION OF FOREIGN BODIES

Risky FBs	Sharp	• May cause perforation (Note: some of our patients take care to wrap FB, such as razor blades, to limit the risks of injury. This cannot always be assumed and it is not typically evident on radiographs that this has occurred.)
	> 6 cm long	• May not pass on its own
	> 2.5 cm width	• May not pass on its own or may obstruct
	Magnet (especially with multiple magnets, or magnet and other metal object ingested at same time)	• Can adhere to each other and cause obstruction or pinch bowel wall causing ischemia or perforation
	Button battery	• May cause caustic reactions, ulceration or perforation
Object Shape	Short-blunt	• Coins, rings (will typically pass without difficulty)
	Long	• Utensils for eating, string, cord, toothbrush
	Sharp-pointed	• Nails, pins, tacks, toothpicks, chicken, and fish bones
Object Type	Button cell and disk batteries	• Button batteries are commonly 6-25 mm in diameter and often contain lithium and additional chemicals, including manganese dioxide or mercuric oxide. • When button batteries become lodged in the GI tract they can damage the mucosa by discharging electricity, cause pressure necrosis and/or leakage of battery contents, which can cause caustic injury, mucosal ulceration and eventually perforation. • The severity of the damage depends on the length of time the battery is lodged, amount of electrical charge left in battery and the size of the battery. • Damage can be seen in as little as two hours with more severe damage in 8-12 hours.
	Cylindrical batteries	• Remove if in the esophagus or if in the stomach for > 48 hours.
	Narcotic packets	• Guidelines recommend observation and NOT attempting endoscopic retrieval.

Commonly ingested FBs in our system include razor blades followed by other radiopaque items like metal pieces, pen fillers, wires, batteries, paper clips, and screws. See page 7 for information on FB Insertions.

DIAGNOSTIC TESTS/PROCEDURES

Diagnostic Tests/Procedures: While community guidelines frequently recommend repeated imaging to locate and monitor the FB, this blanket approach may pose additional risks to our patients with complex mental illness and recurrent ingestion.

In some cases, radiographic localization and identification of FBs can be helpful in guiding management; however, there is also risk to the patient of repeated radiation exposure. In addition, if the patient needs to be transferred offsite for the imaging, they are exposed to the risk of obtaining additional (and potentially riskier) items to ingest (e.g., patients have been known to ingest the metal portions of their seatbelt from the transport van). Providers need to use clinical judgment based on the patient's presentation, history of prior ingestions, the patient's current housing location, and possible items available to the patient to ingest at time of reported ingestion.

1. In many instances the patient can be safely observed at the institution if they are asymptomatic.
2. If radiographs are done, typically a CXR (2 views) and/or abdominal X-Ray (2 views) may be required to spatially locate FB. Neck X-Rays (AP and lateral) may be needed if the patient is symptomatic in the neck.
3. Patients with abdominal pain, fever, GI bleeding, or other symptoms typically require CT scanning to evaluate for the presence of bowel perforation or other pathology. If FB is known to be radiolucent and the patient is symptomatic, a CT may be needed. A Magnetic Resonance Imaging (MRI) scan should not be done due to potential of ingested metal FB.

SUMMARY | DECISION SUPPORT | PATIENT EDUCATION/SELF MANAGEMENT

FOREIGN BODY INGESTION: TREATMENT AND MONITORING

Determine the appropriate level of care based on the patient's symptoms, characteristics of the FB, and location in the GI tract (if known).

- **Observe at institution/expectant management:**
  - Most patients with normal exam and VS who are asymptomatic can be observed in the institution.
    - ◊ Complete serial exams during the observation period.
    - ◊ Consider keeping patient "nothing by mouth" (NPO) or on clear liquid diet during the initial observation period, (this is important if the patient later requires referral to the ED for possible endoscopy).
    - ◊ Send to theED if the patient becomes unstable, develops a fever, abdominal pain, nausea, vomiting, or GI bleed.
    - ◊ Consider imaging, when available, to determine the characteristics and location of the FB in the GI tract (if radiopaque).
      - ◊ **FB in the stomach:** if the FB is not "risky" may continue to be observed at the institution; the FB typically will pass in 4-6 days. Patients should resume a normal diet and monitor their stools for evidence of the FB. Consider consultation for removal if the blunt object remains in the stomach > 3-4 weeks.
      - ◊ **FB is past the duodenum** and the patient has normal VS and a normal physical exam, observe the patient in the institution. This applies to **all FBs past the duodenum**, even risky ones, **except** for multiple magnets or magnet and other metal object ingested at the same time which can adhere to one another and cause bowel problems (send these to the ED).
        - ◊ Consider surgery consult if a sharp FB is in the same location > 3 days.
        - ◊ Consider surgery consult if a blunt FB is in the same location > 1 week.
        - ◊ Most FBs that clear the stomach will spontaneously pass within 1 week.
- **When to send the patient to the community ED:**
  - If at ANY time the patient is objectively symptomatic or unstable.
  - If FB is a **risky FB above the duodenum:**
    - ◊ Anything lodged in esophagus
    - ◊ Battery– disc or cylindrical in the esophagus or those in the stomach > 48 hours
    - ◊ Magnet
    - ◊ Sharp object
    - ◊ Object is > 6 cm long or > 2.5 cm wide
  - See Timing of Endoscopy below.
  - Surgery: avoid if possible, some patients demonstrate self-injurious behavior post-op with surgical wound.
- **Note transport risk:** Patients are at risk for obtaining and ingesting additional FBs during transport and while in a community health care setting. Work with custody to ensure close supervision of the patient during these times.
- **Patient Refusals:** Refusal to be examined, interviewed, X-Rayed, or sent out to the ED should be documented in the health record.
  - NOTE: Unstable patients should be sent to the ED even if they refuse to go. They can refuse medical treatment once at the ED, but they are required to go to the ED if ordered by medical/custody.

TIMING OF ENDOSCOPY (AMERICAN SOCIETY OF GASTROINTESTINAL ENDOSCOPY-BASED ON COMMUNITY EXPERIENCE)

While many FBs will pass unaided, certain FBs require removal. The recommended timing of removal is described below.

Emergent Endoscopy	• Esophageal obstruction (patient unable to manage secretions) • Sharp-pointed objects in the esophagus (or in the stomach/above duodenum if symptomatic) • Disk or button cell batteries that are lodged in the esophagus (or in the stomach/above duodenum if symptomatic) • Magnets in the esophagus (or in the stomach/above duodenum if symptomatic)
Urgent Endoscopy (within 24 hours)	• Esophageal FBs that are not sharp-pointed • Sharp-pointed FBs in the stomach or duodenum (if asymptomatic) • FBs > 6 cm in length that are at or above the proximal duodenum in adults • Magnets within endoscopic reach (if asymptomatic)
Non-urgent (Elective) Endoscopy	• FBs in the stomach with diameter > 2.5 cm • Coins in the esophagus may be observed for 12-24 hours before endoscopic removal in an asymptomatic patient. • Disk, button cell, and cylindrical batteries that are in the stomach of patients without signs of GI injury may be observed for as long as 48 hours. • Batteries remaining in the stomach longer than 48 hours should be removed.

SUMMARY | DECISION SUPPORT | PATIENT EDUCATION/SELF MANAGEMENT

IMAGING

WHEN IMAGING IS DONE

- CCHCS Medical imaging staff shall use approved protocols corresponding to the anatomical area where the FB is suspected to be located.
- Typically 2 views of each anatomical area are needed to localize the FB, for example:
  - Neck: AP and lateral
  - CXR: PA and lateral
  - Abdomen/Pelvis: AP and lateral with upright if concerned for free air
- Prior to the examination, the provider shall order the imaging study to identify:
  - The anatomical area where the foreign body is believed to be located,
  - A brief explanation of the item suspected, and
  - Circumstances of its ingestion/insertion.

PERFORMING THE EXAMINATION

1. All necessary clothing and jewelry shall be removed from the patient.
2. The Radiologic Technologist (Rad Tech) shall place the patient onto the X-Ray table according to the examination protocol for the suspected anatomical area.
3. The Rad Tech shall perform the examination following the examination protocol and mark the examination as STAT in the Radiology Information System and Picture Archiving Communication System (RIS/PACS).
4. A patient may refuse a medical test (e.g., X-Ray for contraband) when ordered or recommended by a medical provider.
   - The refusal shall be documented in the health record in accordance with the Health Care Department Operations Manual (HCDOM), Chapter 3, Article 1, Section 3.1.5, Scheduling and Access to Care.

Advanced Imaging:

- CT Scan: In the ED the patient may require a CT scan if there is evidence of abdominal pain, fever, GI bleeding, or other symptoms suggestive of bowel perforation or other pathology. In addition, if the FB is known to be radiolucent and the patient is symptomatic a CT may be needed.
- MRI: is typically contraindicated when there is a possibility of an ingested metallic object.

PREVENTION

Knowing the motivation for FBI is crucial to successful patient management.

- Reasons for FBI include: sexual gratification, non-suicidal, self-injurious behavior, psychosis, depressive disorder with psychotic features, factitious disorder, malingering, and cognitive disorder**.**
- Patients with recurrent ingestion/insertion episodes often have more severe psychiatric illness. Early and aggressive psychiatric intervention may help curtail the escalation of this self-damaging behavioral pattern.
- Prevention strategies include: prediction of patients at high risk for recurrent FB ingestion/insertion, decrease in the access to objects and change in medical regimen, and/or increasing psychotherapy in psychiatric patients.
- If a patient refuses treatment, document the details of their refusal in the health record (e.g., refusal to be examined, interviewed, X-Rayed, or sent out to the ED).
- The patient shall be instructed to seek medical advice or shall be sent to a HLOC if the following symptoms occur: breathing problems, abdominal pain, fever, vomiting, or unable to tolerate food and drink.
- **Multidisciplinary management is required. Submit a "128 C" order in EHRS, to document FBI to help ensure custody awareness of risk and assistance with safer housing. Once entered into EHRS, the 128 C should be printed and distributed to the patient's Correctional Counselor or other custody designee.**
- Strongly consider consulting MH for all patients who insert FB and try to avoid casting judgment or belittling the patient. Apply a nonjudgmental and open-minded approach when evaluating these patients.

Possible Ways to Protect Patients from Repeated Injury[8]

• *Evaluate risk of imminent recurrence of FBI in the inpatient setting.* Remove objects close to the patient that could be used for repeated injury.
• *Counsel patients about harm-reduction strategies, including less dangerous means of insertion.* (e.g., not inserting sharp object into the abdomen or chest which can lead to perforation of intrathoracic or intraabdominal organs)
• *Treat underlying psychiatric factors that predispose the patients to recurrent insertions.* MH providers can assist by prescribing medications for acute psychiatric problems, providing behavioral treatment of recurrent self-harm, and providing psychotherapy.
• *Emphasize the need to seek prompt medical attention following any future FBI injury.* Patients often wish to avoid embarrassment or guilt and delay seeking medical attention after inserting a FB. This avoidance behavior has resulted in death due to otherwise manageable injuries following FB insertion.

FOREIGN BODY INSERTION

While FB ingestion is more common in our setting, FB insertion (polyembolokoilamania) does occur. Common areas of FB insertion are the rectum, vagina, urethra, nose, and ears. Less common areas include: subcutaneous areas, fistulas, and ostomy sites.

EVALUATION

Rectum[7]	• Categorized as voluntary vs. involuntary placement (i.e., rape or assault) and sexual vs. nonsexual. • The FB can be a wide variety of objects with the most common items being phallic-shaped items (bottles or glasses). Sexual arousal is the reason for half of cases.[9] • Patients are often unwilling to disclose that they inserted the rectal FB, delaying the time they seek medical attention. Complications of rectal FB include tearing of rectal mucosa, fecal incontinence, perforation, wound infections, and incisional hernias from laparotomies. • Many patients will only admit to a rectal FB when directly asked about it. Instead, they may complain of anorectal or abdominal pain, blood per rectum, or mucus discharge without revealing the presence of an FB. Many patients present hours or even days after placement, and after repeated failed attempts at removal. • Abdominal exam may be normal, show tenderness or a palpable mass or diffuse peritonitis if perforation has occurred. • **Any rectal exam should be preceded by X-Rays to identify the location and characteristics of the FB.** • Rectal exam may be normal or show bright red blood or melena. The FB may not be palpable on rectal exam. Do not try to palpate any sharp FB or any drug packets as these may rupture. • **Diagnostics Tests:** Do abdominal X-Ray AP (flat plate) to identify the FB and an upright film to evaluate for pneumoperitoneum. Do a CT if there is concern related to a radiolucent object or if there are concerning findings on initial exam.
Vagina[8] **or Urethra**	• **Vagina:** Can lead to pelvic pain as well as septic shock. Remove early. • **Urethra:** Most present with pain or inability to void. Consult urology early. Aggressive treatment should be undertaken because even when the penis appears dark or necrotic, salvage rates have been high. Send unstable patients to the ED. Complications of urethral insertions include UTI, hematuria, urinary retention, urethral tears, abscess, urethral fistulas, as well as urethral strictures.
Nose or Ears[10]	• Button magnets in the nose can adhere to each other, leading to nasal mucosal injury and severe bleeding. Remove early.
Subcutaneous[8]	• **Subcutaneous insertions can lead to serious injury depending on the type of FB inserted as well as the location of injury.** • Sharp objects (e.g., wires) inserted into the abdomen can lead to stomach or bowel perforation and into the chest can lead to cardiac tamponade and pneumothorax. • Seriously consider sending these patients, if they are symptomatic, out to the ED for evaluation, even if the FB has been present for months as the retained FB can travel and still cause damage months after insertion.

TREATMENT AND MONITORING OF RECTAL FOREIGN BODY

- **If the patient is symptomatic:** Send to the ED for management. Keep the patient NPO. For those who have unstable VS or have signs of perforation or peritonitis (abdominal tenderness/rebound/guarding/rigidity), resuscitate as needed with IV fluids while waiting transport to the ED.
- **If the patient is asymptomatic:** Clinically stable, asymptomatic patients with FBs that are located proximally can be observed to see if the FB will progress to the distal rectum.
- **Do not use enemas or suppositories as this may force the FB into a more proximal location or cause more extensive injury, especially with sharp objects. If the FB does not pass on its own, send to the ED if the patient is symptomatic or refer to the surgeon urgently to remove it if the patient is asymptomatic.** The key to success of removal of the FB will be adequate patient relaxation with procedural sedation to be done by the surgeon in the surgeon's office or operating room, or in the ED setting, not at the institutions. Do not try to blindly grasp the FB, especially if it is sharp.
- **Post removal management:** All patients should remain in the hospital or surgeon's office for a period of observation and repeat examinations. Post extraction endoscopy with either a proctoscope or sigmoidoscope should be performed to evaluate the anorectal mucosa for injury and ensure there is no retained FB. Repeat X-Rays may be required if perforation is suspected.

RESOURCES

1. Predictors of recurrent ingestion of gastrointestinal foreign bodies, Grimes, Ian, Can J Gastroenterol. 2013 Jan; 27(1): e1–e4.
2. Gitlin, DE, et. al, Foreign Body Ingestion in patients with personality disorders, Pyschosomatics, 2007, 48:162-166.
3. Evans, DC. Intentional ingestions of foreign objects among prisoners: A review, World J Gastrointest Endosc. 2015 Mar 16; 7(3): 162–168.
4. Volpi, A, Ingestion of foreign bodies among prisoners: a ten years retrospective study at University Hospital of Southern Italy, G Chir. 2017 Mar-Apr; 38(2): 80–83.
5. Triadafilopoulos, G. Ingested foreign bodies and food impactions in adults, UpToDate, Oct 2018.
6. Jones, C. Association between intentional ingestion of foreign objects and psychiatric disease among prisoners: A retrospective study, IJAM, Vol 3 Issue 1, 2017 pp 16-22.
7. Steele, Scott, et. al, Rectal foreign bodies. April 12, 2017 ed: UpToDate; 2018.
8. Unruh, Brandon T. et. al, Insertion of Foreign Bodies (polyembolokoilamania): Underpinnings and Management Strategies. Published online 2012 Feb 16. US National Library of Medicine National Institutes of Health. PMC3357565.
9. Lucerna, Alan. Foreign Body Insertions: A Review. Emergency Medicine. 2017 July;49(7):315-319.
10. Hunter, Tim B. Taljanovic, Mihra S. Foreign Bodies: Insertions. Medical Apparatus Imaging Guide to Orthopedic Devises. 2013.
11. Podratz, Chris. Igbinosa, Felix. McCabe, Conall. Clark, Edgar. Kelley, Amber. LeDuc, Leah. Bell, Celia. Appropriately Reducing Hospital Send-Outs For Incarcerated Foreign Body Ingestion Patients, Lean Six Sigma Green Belt Project, 2018.
12. Foreign object ingestion and esophageal food impaction: An update and review on endoscopic management Fung BM, Sweetser S, Wong Kee Song LM, Tabibian JH

PATIENT EDUCATION/SELF MANAGEMENT

WHAT YOU SHOULD KNOW IF YOU SWALLOW OR INSERT A FOREIGN OBJECT

WHAT IS A FOREIGN OBJECT?

Foreign objects are things that should **not** be in the human body, like:

- Weapons
- Drug-filled balloons
- Razor blades
- Razors
- Cell phones
- Pens
- Batteries
- Knives, forks, and spoons
- Staples/nails
- Paper clips
- Cartons
- Foam cups

WHAT SHOULD I DO IF I HAVE A FOREIGN OBJECT IN MY BODY?

Tell health care staff **what** you swallowed or inserted.
Report any of these symptoms:

- Pain
- Bleeding
- Feeling sick and throwing up
- Difficulty breathing
- Hard to swallow
- Problems with bowel movements
- Urination problems
- Feeling warm or feverish
- Anxiety or jitters
- Drowsiness
- Other changes in how you feel

WHAT COULD HAPPEN IF I SWALLOW OR INSERT A FOREIGN OBJECT?

- Serious or permanent injury to body tissue or organs
- Your bladder, stomach, and/or bowel could burst and you might require a **permanent colostomy** "bag" to collect your stool
- Serious infection
- Irritation or swelling
- Blockage of the airway or intestines (due to change of intestine position or bowel swelling from soaking up body fluids)
- The foreign body could get stuck or move to another part of the body. You may need medical help to remove it.
- Development of a fistula (abnormal connection between your bowel, stomach, esophagus, and the skin). This could result in permanent limitation in eating and drinking by mouth with dependence on IV feeding for the rest of your life.

TREATMENT OF FOREIGN OBJECT IN BODY:

The location and type of foreign object determines treatment which may include:

- Waiting for passage of the foreign object
- Removal by suction
- Removal with instruments (possibly including use of a scope)
- Surgical removal

PERMAMENT DAMAGE TO YOUR BODY MAY OCCUR FROM SINGLE OR REPEATED SWALLOWING OR INSERTION OF A FOREIGN OBJECT

EDUCACIÓN PARA EL PACIENTE/CONTROL PERSONAL DEL CASO

LO QUE DEBE SABER SI SE TRAGA O INSERTA UN OBJETO EXTRAÑO

¿QUÉ ES UN CUERPO EXTRAÑO?

Los cuerpos extraños son cosas que <u>no</u> deberían estar en el cuerpo humano, como:

- Armas
- Globos rellenos de drogas
- Navajas de afeitar
- Rastrillos
- Teléfonos celulares
- Bolígrafos
- Bacterías
- Cuchillos, tenedores y cucharas
- Grapas o clavos
- Clips para papel
- Cartones
- Vasos desechables

¿QUÉ DEBO HACER SI TENGO UN OBJETO EXTRAÑO EN MI CUERPO?

Avise al personal médico **<u>lo que</u>** se ha tragado o insertado. Informe inmediatamente al personal médico si tiene cualquiera de estos síntomas:

- Dolor
- Sangrado
- Sentirse enfermo y vomitar
- Dificultad para respirar
- Dificultad para tragar
- Problemas al defecar
- Problemas para orinar
- Sentirse caliente o con fiebre
- Ansiedad o nerviosismo
- Somnolencia
- Otros cambios en cómo se siente

¿QUÉ PODRÍA PASAR SI TRAGO O ME INSERTO UN OBJETO EXTRAÑO?

- Una lesión grave o permanente de los tejidos u órganos del cuerpo.
- Su vejiga, estómago o intestino podrían reventarse y es posible que necesite una “bolsa” **<u>de colostomía permanente</u>** para recoger sus heces.
- Una infección grave.
- Irritación o inflamación.
- Un bloqueo de las vías respiratorias o de los intestinos (debido al cambio de posición del intestino o a la inflamación del intestino por absorber los líquidos corporales).
- El objeto extraño podría atorarse o moverse a otra parte del cuerpo. Es posible que requiera asistencia médica para retirarlo.
- Desarrollo de una fístula (conexión anormal entre el intestine, el estómago, el esófago y la piel). Esto podría resultar en una limitación permanente para comer y beber por vía oral con dependencia en la alimentación intravenosa por el resto de la vida.

TRATAMIENTO PARA UN OBJETO EXTRAÑO EN EL CUERPO:

La ubicación y el tipo del objeto extraño determinan el tratamiento, el cual puede incluir:

- Esperar a que el objeto extraño pase
- Retirarlo con succión
- Retirarlo con instrumentos (posiblemente con el uso de un tubo)
- Retirarlo con una cirugía

ES POSIBLE QUE TRAGAR O INSERTAR UN OBJETO EXTRAÑO EN UNA O REPETIDAS OCASIONES PROVOQUE UN DAÑO PERMANENTE EN SU CUERPO