HERNIA, HIATAL
Includes Hiatal Hernia Repair

Background

This case definition was developed by the Armed Forces Health Surveillance Branch (AFHSB) for the purpose of epidemiological surveillance of hiatal hernia and hernia repair.

Clinical Description

A hiatal hernia is an anatomic abnormality where the esophageal hiatus becomes enlarged and abdominal structures (e.g., the stomach) protrude up from the abdominal cavity, through the diaphragm, and into the thoracic cavity. Type I hiatal hernias is characterized by migration of the junction of the esophagus and stomach to a position above the diaphram. Published reports estimate that approximately 95% of diagnosed hiatal hernias are Type I. Type I hiatal hernias are often asymptomatic. Larger hernias characterized by the migration of the esophagus, fundus of the stomach (Types II and II) or portions of the omentum, colon, or small intestine (Type IV) are more serious and may require surgery. The most common symptoms associated with hiatal hernia are chest tightness, heartburn, acid reflux, and regurgitation. Treatment is with antacids and medications to reduce or block acid production and, in a small number of patients, surgical repair.[1]

Case Definition and Incidence Rules

For surveillance purposes, a case of ***hiatal hernia*** is defined as:
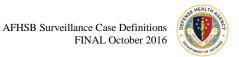
- *One hospitalization or outpatient medical encounter* with a case defining diagnosis of hiatal hernia (see ICD9 and ICD10 code lists below) in *any* diagnostic position.

For surveillance purposes, a case of a ***hiatal hernia surgical repair*** is defined as:

- One incident case of hiatal hernia as defined above PLUS:

- *One hospitalization* with a case defining procedure (PR) code for a surgical hiatal hernia repair (see ICD9 and ICD10 code lists below), coincident with, or subsequent to, the incident diagnosis, in *any* position; or

- *One outpatient medical encounter* with a case defining Current Procedure Terminology (CPT) code for a surgical hiatal hernia repair (see CPT code list below), coincident with, or subsequent to, the incident diagnosis, in *any* position.

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[1] Armed Forces Health Surveillance Branch. Incidence of Hiatal Hernia in Service Members, Active Component, U.S. Armed Forces, 2005-2014. *Medical Surveillance Monthly Report (MSMR);* 2016 Aug; Vol 23(8): 11-15.

Case Definition and Incidence Rules *(continued)*

Incidence rules:

For individuals who meet the case definition:

- For hiatal hernia and hiatal hernia surgical repair the incidence date is considered the date of the first hospitalization or outpatient medical encounter that includes the defining diagnosis.

- An individual may be considered an incident case only *once per surveillance period.*

Exclusions:

- Individuals with a case defining medical encounter prior to the surveillance period.

Codes

The following ICD9 and ICD10 codes are included in the case definition:

Condition	ICD-10-CM Codes	ICD-9-CM Codes
Hiatal hernia	*K44 (diaphragmatic hernia)*	--
	- K44.0 (diaphragmatic hernia with obstruction, without gangrene)	552.3 (diaphragmatic hernia with obstruction)
	- K44.1 (diaphragmatic hernia with gangrene)	551.3 (diaphragmatic hernia with gangrene)
	- K44.9 (diaphragmatic hernia without obstruction or gangrene)	553.3 (diaphragmatic hernia)

Procedure	ICD-10-CM (PR) Codes	ICD-9-CM (PR) Codes
Hiatal hernia repair *(inpatient)*	*0BQR (diaphragm , right)*	*53.7 (repair of diaphragmatic hernia, abdominal approach)*
	- PCS 0BQR0ZZ (repair *right* diaphragm, open approach)	- 53.71 (laparoscopic repair of diaphragmatic hernia, abdominal approach)
	- PCS 0BQR3ZZ (repair *right* diaphragm, percutaneous approach)	- 53.72 (other and open repair of diaphragmatic hernia, abdominal approach)
	- PCS 0BQR4ZZ (repair *right* diaphragm, percutaneous endoscopic approach)	- 53.75 (repair of diaphragmatic hernia, abdominal approach, not otherwise specified)
	0BQS (diaphragm , left)	
	- PCS 0BQS0ZZ (repair *left* diaphragm, open approach)	*(continued on next page)*

- PCS 0BQS3ZZ (repair *left* diaphragm, percutaneous approach)	*53.8 (repair of diaphragmatic hernia, thoracic approach)*
- PCS 0BQS4ZZ (repair *left* diaphragm, percutaneous endoscopic approach)	- 53.80 (repair of diaphragmatic hernia with thoracic approach, not otherwise specified)
0BUR0 (diaphragm , right, open)	- 53.82 (repair of parasternal hernia)
- PCS 0BUR07Z (supplement *right* diaphragm with autologous tissue substitute, open approach)	- 53.83 (laparoscopic repair of diaphragmatic hernia, with thoracic approach)
- PCS 0BUR0JZ (supplement *right* diaphragm with synthetic substitute, open approach)	- 53.84 (other and open repair of diaphragmatic hernia, with thoracic approach)
- PCS 0BUR0KZ (supplement *righ*t diaphragm with nonautologous tissue substitute, open approach)	
0BUR4 (diaphragm , right, percutaneous endoscopic)	
- PCS 0BUR47Z (supplement *right* diaphragm with autologous tissue substitute, percutaneous endoscopic approach)	
- PCS 0BUR4JZ (supplement *right* diaphragm with synthetic substitute, percutaneous endoscopic approach)	
- PCS 0BUR4KZ (supplement *righ*t diaphragm with nonautologous tissue substitute, percutaneous endoscopic approach)	
0BUSO (diaphragm , left, open)	
PCS 0BUS07Z (supplement *left* diaphragm with autologous tissue substitute, open approach)	
PCS 0BUS0JZ (supplement *left* diaphragm with synthetic substitute, open approach)	
PCS 0BUS0KZ (supplement *left* diaphragm with nonautologous tissue substitute, open approach)	
0BUS4 (diaphragm , left, percutaneous endoscopic)	
PCS 0BUS47Z (supplement *left* diaphragm with autologous tissue substitute, percutaneous endoscopic approach)	
PCS 0BUS4JZ (supplement *left* diaphragm with synthetic substitute, percutaneous endoscopic approach)	*(continued on next page)*

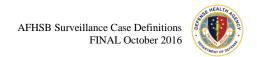|	PCS 0BUS4KZ (supplement *left* diaphragm with nonautologous tissue substitute, percutaneous endoscopic approach)	

Procedures	CPT Codes

Hiatal hernia repair *(outpatient)*	39502 (repair, paraesophageal hernia)
	39503 (repair of diaphragm hernia)
	39520 (repair, diaphragmatic hernia [esophageal hiatal]; transthoracic)
	39530 (repair, diaphragmatic hernia [esophageal hiatal]; combined thoracoabdominal)
	39531 (repair, diaphragmatic hernia [esophageal hiatal]; combined thoracoabdominal, with dilatation of stricture [with or without gastroplasty])
	39540 (repair, diaphragmatic hernia (other than neonatal), traumatic; acute)
	39541 (repair, diaphragmatic hernia (other than neonatal), traumatic; chronic)
	43281 (laparoscopy, surgical, repair of paraesophageal hernia, includes fundoplasty, when performed; without implantation of mesh)
	43332 (repair, paraesophageal hiatal hernia (including fundoplication), via laparotomy, except neonatal; without implantation of mesh or other prosthesis)
	43333 (repair, paraesophageal hiatal hernia (including fundoplication), via laparotomy, except neonatal; with implantation of mesh or other prosthesis)
	43334 (repair, paraesophageal hiatal hernia (including fundoplication), via thoracotomy, except neonatal; without implantation of mesh or other prosthesis)
	43335 (repair, paraesophageal hiatal hernia (including fundoplication), via thoracotomy, except neonatal; with implantation of mesh or other prosthesis)
	43336 (repair, paraesophageal hiatal hernia, (including fundoplication), via thoracoabdominal incision, except neonatal; without implantation of mesh or other prosthesis)
	43337 (repair, paraesophageal hiatal hernia, (including fundoplication), via thoracoabdominal incision, except neonatal; with implantation of mesh or other prosthesis)

Development and Revisions

- In September of 2016 the case definition was updated to include ICD10 codes.

- This case definition was developed in August of 2016 by staff from the Epidemiology and Analyses (E&A) division and the *Medical Surveillance Monthly Report (MSMR)* for use in a *MSMR* article on hiatal hernia.[1] The case definition was developed based on reviews of the ICD9 codes, the scientific literature, and previous AFHSC analyses.

Case Definition and Incidence Rule Rationale

- None

Code Set Determination and Rationale

- Some of the ICD9 procedure codes have been deleted or replaced in recent years. Moreover, the ICD10 procedure codes do not refer specifically to repair of a hiatal hernia. They refer to repair of the diaphragm; therefore the code set may include procedures for conditions other than repair of hiatal hernia.

Reports

AFHSB reports on hiatal hernia in the following reports:

- None

Review

Oct 2016   Case definition reviewed and adopted by the AFHSB Surveillance Methods and Standards (SMS) working group.

Aug 2016   Case definition developed by AFHSB E&A and *MSMR* staff.

Comments

- None