
The Effect of CPT Coding Changes on Hernia Repair Reporting: An ACHQC Analysis

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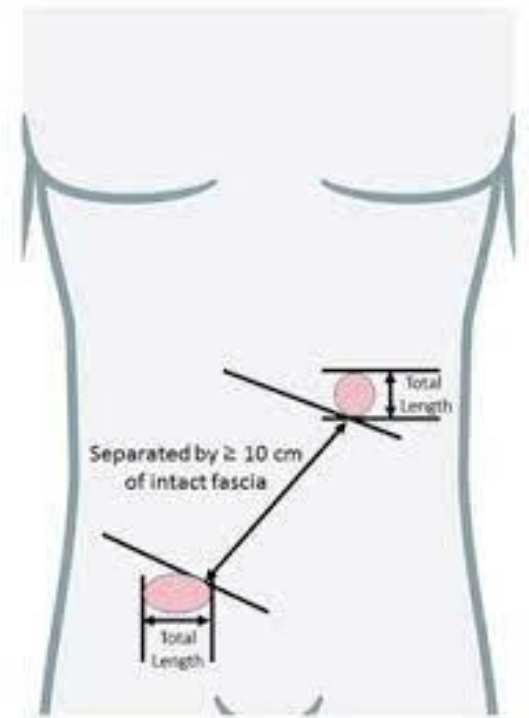
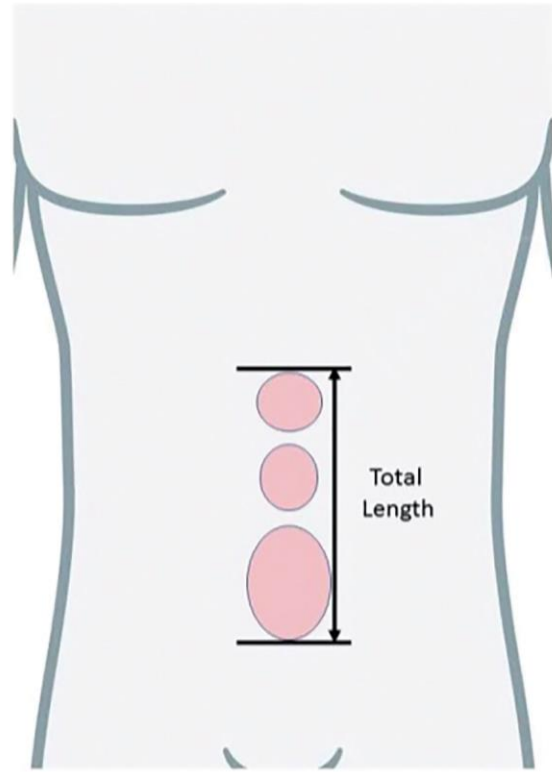
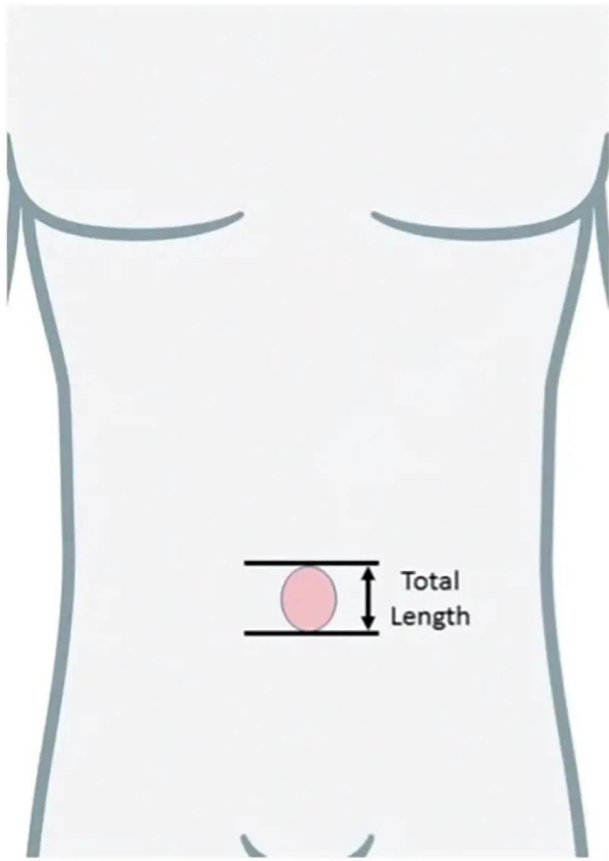
Disclosures

- none

HERNIA CODING CHANGES INTRODUCED IN 2023

Changes in Hernia Coding 2023

- Multiple changes made
- Removed a lot of old codes
 - Remove placement of mesh codes
 - Remove lap vs open
- Changed to a 0 day global period for hernia
- Specific type of hernia repair code (parastomal in its own category)
- Added mesh Removal code
- Added size groupings (0-3cm, 3-10cm, >10cm)
- etc



Coding - Hernia Sizes

	Size	Severity of Hernia(s)	Anterior Abdominal Hernia(s) Repair Code
Initial	<3 cm	Reducible	49591
		Incarcerated/Strangulated	49592
Recurrent	<3 cm	Reducible	49613
		Incarcerated/Strangulated	49614
Initial	3 cm to 10 cm	Reducible	49593
		Incarcerated/Strangulated	49594
Recurrent	3 cm to 10 cm	Reducible	49615
		Incarcerated/Strangulated	49616
Initial	>10 cm	Reducible	49595
		Incarcerated/Strangulated	49596
Recurrent	>10 cm	Reducible	49617
		Incarcerated/Strangulated	49618

Study

- With the new changes in CPT coding and billing will this have any changes on reporting of hernia and hernia operation characteristics?

More specific for our study:

- Analyze the effect of CPT coding changes on reporting of hernia SIZE

Methods

- IRB approval
- ACHQC approval
- Retrospective review of ACHQC database for 1 year prior to and 6 months after the 2023 coding changes were instituted

- Primary outcome – hernia size
- Standard secondary outcomes

Patient Characteristics

Characteristics	N	2022 N=4732	2023 N=2187	Test Statistic
Sex	6919			$\chi^2=3.2$, $P=0.074^1$
Female		44% (2066)	46% (1005)	
Male		56% (2666)	54% (1182)	
Race	6919			$\chi^2=6.9$, $P=0.23^1$
American Indian or Alaskan Native		0.41% (19)	0.38% (8)	
Asian or Pacific Islander		0.84% (39)	0.87% (18)	
Black, not of Hispanic origin		9.41% (437)	8.27% (172)	
Hispanic		4.84% (225)	5.14% (107)	
Middle Eastern		0.84% (39)	0.38% (8)	
White, not of Hispanic origin		83.66% (3886)	84.95% (1767)	
Age (Age capped at 90)	6919			$F_{1.6917}=0.4$, $P=0.18^1$ $\chi^2=5$, $P=0.29^1$
18-29.9		2.1% (100)	2.3% (51)	
30-39.9		10.1% (477)	10.3% (225)	
40-49.9		16.1% (762)	16.7% (365)	
50-59.9		24.6% (1166)	22.2% (486)	
≥60		47.1% (2227)	48.5% (1060)	
Prevalence of Diabetes	6919			$\chi^2=0$, $P=0.98^1$
No		84% (3952)	84% (1827)	
Yes		16% (780)	16% (360)	
Prevalence of Hypertension	6919			$\chi^2=0.38$, $P=0.54^1$
No		54% (2565)	53% (1168)	
Yes		46% (2167)	47% (1019)	

Surgical Data

Primary surgical indication			
Asymptomatic	6919		
No		93.5% (4427)	94.5% (2066)
Yes		6.5% (305)	5.5% (121)
Pain	6919		
No		19% (908)	18% (393)
Yes		81% (3824)	82% (1794)
Enlarging/interfering	6919		
No		40% (1909)	43% (947)
Yes		60% (2823)	57% (1240)
Infected mesh	6919		
No		99.03% (4686)	98.72% (2159)
Yes		0.97% (46)	1.28% (28)
Bowel obstruction	6919		
No		94.9% (4492)	94.3% (2063)
Yes		5.1% (240)	5.7% (124)
Fistula	6919		
No		99.45% (4706)	99.36% (2173)
Yes		0.55% (26)	0.64% (14)

Operative Data

	N	2022 N=4732	2023 N=2187	Test Statistic
OR Time	6915			$\chi^2=2.2, P=0.7^1$
0-59 minutes		30% (1413)	30% (656)	
60-119 minutes		26% (1249)	27% (601)	
120-179 minutes		18% (862)	18% (392)	
180-239 minutes		11% (532)	12% (252)	
240+ minutes		14% (672)	13% (286)	
Hernia grade	6914			$\chi^2=5.3, P=0.069^1$
1		34% (1599)	31% (679)	
2		55% (2609)	57% (1246)	
3		11% (521)	12% (260)	
Elective case	6919			$\chi^2=4.5, P=0.033^1$
No		1.37% (65)	0.78% (17)	
Yes		98.63% (4667)	99.22% (2170)	
ASA Class	6919			$\chi^2=4.4, P=0.49^1$
1		7.67% (363)	7.41% (162)	
2		42.37% (2005)	40.97% (896)	
3		47.49% (2247)	48.51% (1061)	
4		1.54% (73)	1.83% (40)	
5		0.02% (1)	0.00% (0)	
None Assigned		0.91% (43)	1.28% (28)	
Recurrent	6919			$\chi^2=0.06, P=0.8^1$
No		76% (3609)	76% (1662)	
Yes		24% (1123)	24% (525)	

Hernia width categorized	Year 2022	Year 2023	$\chi^2=5.4, P=0.068^1$
0-3cm	49% (2291)	46% (988)	
3-10cm	33% (1545)	35% (755)	
>10cm	18% (834)	19% (403)	
Hernia length categorized			$\chi^2=14, P=0.001^1$
0-3cm	45% (2102)	40% (865)	
3-10cm	23% (1079)	25% (533)	
>10cm	32% (1471)	35% (748)	

Postop evaluation

	N	2022 N=4732	2023 N=2187	Test Statistic
Readmission	6919			$\chi^2=1.1, P=0.29$
No		96.8% (4582)	97.3% (2128)	
Yes		3.2% (150)	2.7% (59)	
Hernia recurrence	6919			$\chi^2=0.01, P=0.93$
No		99.62% (4714)	99.63% (2179)	
Yes		0.38% (18)	0.37% (8)	
Ileus	516			$\chi^2=0, P=0.95$
No		50% (176)	50% (83)	
Yes		50% (174)	50% (83)	
Bowel obstruction	516			$\chi^2=0.69, P=0.41$
No		97.7% (342)	98.8% (164)	
Yes		2.3% (8)	1.2% (2)	
Re-Operation	6919			$\chi^2=0.95, P=0.33$
No		98.4% (4657)	98.7% (2159)	
Yes		1.6% (75)	1.3% (28)	
Post-op complications (any)	6919			$\chi^2=0.01, P=0.94$
No		84% (3969)	48.51% (1836)	
Yes		16% (763)	16% (351)	
Surgical site infection (SSI)	6919			$\chi^2=0, P=0.99$
No		97.3% (4602)	97.3% (2127)	
Yes		2.7% (130)	2.7% (60)	
Surgical site occurrences (SSO)	6919			$\chi^2=0.03, P=0.87$
No		91.6% (4335)	91.5% (2001)	
Yes		8.4% (397)	8.5% (186)	
Surgical site occurrences (SSO/I)	6919			$\chi^2=0, P=0.98$
No		90% (4246)	90% (1962)	
Yes		10% (486)	10% (225)	
Postop SSI/SSO requiring procedural intervention	6919			$\chi^2=0.32, P=0.57$
No		96.9% (4586)	97.2% (2125)	
Yes		3.1% (146)	2.8% (62)	

Conclusion

- Six months after implementation of the CPT changes there appears to be a statistically significant increase in the size of hernias being reported.

Discussion

- Need to follow up for a full year/multiple years to see if this is just an anomaly.
- Other possible reasons:
 - Paying more attention to details/exacts for reporting
 - Reporting larger size if close
 - No change will be seen longer term

Discussion

- ❑ Correlation with other CPT changes
 - Mesh use
 - Mesh removal
 - Lap vs robotic vs open
 - Incarcerated vs reducible

- ❑ Follow up frequency
- ❑ Hospital length of stay

QUESTIONS?