Table A. List of the most common physiologically complex ICD-9-CM, with **multiple** limitations[a]

ICD9	Description	Cumulative % of the 465 procedures	% of the 996,303 codes among the discharges	Cumulative % of the 996,303 codes among the discharges
3615	Single internal mammary-coronary artery bypass	0.22%	7.47%	7.47%
3950	Angioplasty of other non-coronary vessel(s)	0.43%	5.98%	13.45%
0309	Other exploration and decompression of spinal canal	0.65%	4.14%	17.59%
3612	(Aorto)coronary bypass of two coronary arteries	0.86%	3.24%	20.83%
3613	(Aorto)coronary bypass of three coronary arteries	1.08%	2.34%	23.17%
3521	Open and other replacement of aortic valve with tissue graft	1.29%	2.31%	25.48%
8051	Excision of intervertebral disc	1.51%	2.10%	27.58%
3611	(Aorto)coronary bypass of one coronary artery	1.72%	2.01%	29.60%
3761	Implant of pulsation balloon	1.94%	1.99%	31.59%
3979	Other endovascular procedures on other vessels	2.15%	1.97%	33.56%
3929	Other (peripheral) vascular shunt or bypass	2.37%	1.81%	35.37%
8162	Fusion or refusion of 2-3 vertebrae	2.58%	1.67%	37.04%
8849	Arteriography of other specified sites	2.80%	1.65%	38.69%
3220	Thoracoscopic excision of lesion or tissue of lung	3.01%	1.58%	40.27%
3971	Endovascular implantation of other graft in abdominal aorta	3.23%	1.48%	41.74%
0159	Other excision or destruction of lesion or tissue of brain	3.44%	1.45%	43.19%
3327	Closed endoscopic biopsy of lung	3.66%	1.29%	44.49%
3949	Other revision of vascular procedure	3.87%	1.27%	45.75%
0131	Incision of cerebral meninges	4.09%	1.21%	46.96%
3522	Open and other replacement of aortic valve	4.30%	1.17%	48.13%
0221	Insertion or replacement of external ventricular drain [EVD]	4.52%	1.16%	49.29%
8163	Fusion or refusion of 4-8 vertebrae	4.73%	1.09%	50.38%
8152	Partial hip replacement	4.95%	1.07%	51.45%
3794	Implantation or replacement of automatic cardioverter/defibrillator, total system	5.16%	1.00%	52.45%
8107	Lumbar and lumbosacral fusion of the posterior column, posterior technique	5.38%	0.96%	53.41%
3614	(Aorto)coronary bypass of four or more coronary arteries	5.59%	0.95%	54.37%
3249	Other lobectomy of lung	5.81%	0.85%	55.21%
8919	Video and radio-telemetered electroencephalographic monitoring	6.02%	0.84%	56.06%
3712	Pericardiotomy	6.24%	0.80%	56.86%

3734	Excision or destruction of other lesion or tissue of heart, endovascular approach	6.45%	0.80%	57.66%
3406	Thoracoscopic drainage of pleural cavity	6.67%	0.79%	58.44%
5569	Other kidney transplantation	6.88%	0.78%	59.23%
3512	Open heart valvuloplasty of mitral valve without replacement	7.10%	0.74%	59.97%
8105	Dorsal and dorsolumbar fusion of the posterior column, posterior technique	7.31%	0.74%	60.71%
9205	Cardiovascular and hematopoietic scan and radioisotope function study	7.53%	0.73%	61.45%
3241	Thoracoscopic lobectomy of lung	7.74%	0.73%	62.18%
3726	Catheter based invasive electrophysiologic testing	7.96%	0.72%	62.90%
3845	Resection of vessel with replacement, thoracic vessels	8.17%	0.70%	63.60%
3733	Excision or destruction of other lesion or tissue of heart, open approach	8.39%	0.67%	64.28%
8106	Lumbar and lumbosacral fusion of the anterior column, anterior technique	8.60%	0.66%	64.94%
3452	Thoracoscopic decortication of lung	8.82%	0.65%	65.59%
0070	Revision of hip replacement, both acetabular and femoral components	9.03%	0.61%	66.20%
3931	Suture of artery	9.25%	0.61%	66.81%
0359	Other repair and plastic operations on spinal cord structures	9.46%	0.61%	67.42%
8102	Other cervical fusion of the anterior column, anterior technique	9.68%	0.58%	68.01%
3533	Annuloplasty	9.89%	0.58%	68.58%
0212	Other repair of cerebral meninges	10.11%	0.56%	69.14%
3451	Decortication of lung	10.32%	0.54%	69.68%
3727	Cardiac mapping	10.54%	0.53%	70.21%
3420	Thoracoscopic pleural biopsy	10.75%	0.53%	70.74%
8151	Total hip replacement	10.97%	0.53%	71.27%
3229	Other local excision or destruction of lesion or tissue of lung	11.18%	0.52%	71.78%
3523	Open and other replacement of mitral valve with tissue graft	11.40%	0.51%	72.29%
5022	Partial hepatectomy	11.61%	0.51%	72.79%
0039	Other computer assisted surgery	11.83%	0.49%	73.29%
3812	Endarterectomy, other vessels of head and neck	12.04%	0.46%	73.75%
0234	Ventricular shunt to abdominal cavity and organs	12.26%	0.45%	74.20%
3505	Endovascular replacement of aortic valve	12.47%	0.45%	74.65%
3925	Aorta-iliac-femoral bypass	12.69%	0.44%	75.09%
527	Radical pancreaticoduodenectomy	12.90%	0.44%	75.53%
8103	Other cervical fusion of the posterior column, posterior technique	13.12%	0.44%	75.97%
0353	Repair of vertebral fracture	13.33%	0.43%	76.41%
3524	Open and other replacement of mitral valve	13.55%	0.42%	76.83%

034	Excision or destruction of lesion of spinal cord or spinal meninges	13.76%	0.42%	77.25%
5771	Radical cystectomy	13.98%	0.42%	77.67%
3972	Endovascular (total) embolization or occlusion of head and neck vessels	14.19%	0.42%	78.08%
0124	Other craniotomy	14.41%	0.41%	78.50%
346	Scarification of pleura	14.62%	0.39%	78.89%
3403	Reopening of recent thoracotomy site	14.84%	0.39%	79.28%
3421	Transpleural thoracoscopy	15.05%	0.38%	79.66%
8108	Lumbar and lumbosacral fusion of the anterior column, posterior technique	15.27%	0.37%	80.03%

The listed frequencies of the ICD-9-CM are among discharges with national mean length of stay of the Diagnosis Related Groups being 4.00 days or longer. [a]Because of the limitations of this table, none of the 3 columns of incidences was used in the current article. One limitation of this table is that procedures are clustered within hospitals (e.g., based on specialty). We recently used State of Texas data to quantify the incidence of rare combinations of procedures at each hospital.[45] Second, the procedures that are the most common nationwide are not the same as procedures that are most common at individual hospitals, because there is substantial heterogeneity of diversity among hospitals.[27] Being the most common nationwide does not suggest being the most common at each hospital, but rather presence of the procedure at many hospitals.[27] For a recent paper on the topic, see our article on appropriate interpretation of incidence data from the American Society of Anesthesiologists' National Anesthesia Clinical Outcomes Registry (NACOR) data.[27]