

Higher Acuity Outpatient Spine Surgery

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Acuity Definition

- Simple:
 - lumbar decompression, kyphoplasty, cervical foraminotomy
- Middle:
 - laminoplasty, ACDF
- Complex:
 - ADR, ALIF, PSF, LLIF
 - Keep for 23 hours

Outpatient Criteria

- Criteria
 - Live 30 minutes from a hospital
 - BMI<42
 - Cardiology evaluation
 - Caregiver for 24 hours after surgery
 - ASA: Low to moderate

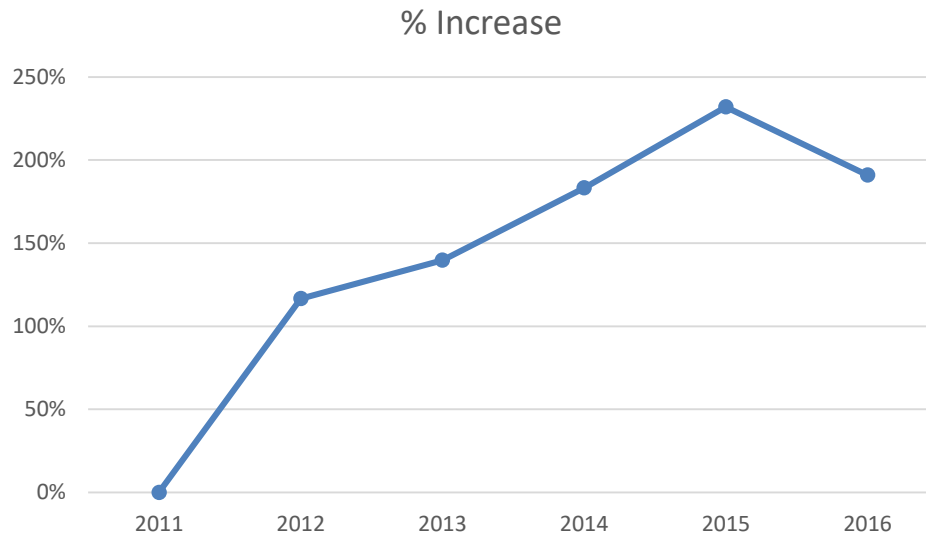
Chin KR, Coombs AV, Seale JA. Feasibility and patient reported outcomes after outpatient single-level instrumented lumbar interbody fusion in a surgery center. Spine. 40;1. E36-42. 2014

30 Day Readmissions for ACDF

- NSQIP Database from 2012-2014
 - 17,088 patients with elective ACDF
 - 545 (3.2%) Readmissions
 - 293 (53.8%) Nonsurgical site related reasons
 - » Neuropsychiatric 44
 - » Cardiovascular 39
 - » Pneumonia 37
 - 184 (33.8%) Surgical site related
 - » Infection 42
 - » Hematoma 42
 - » Dysphagia 32
 - 84 Undocumented

Spine Cases (2011 -2016)

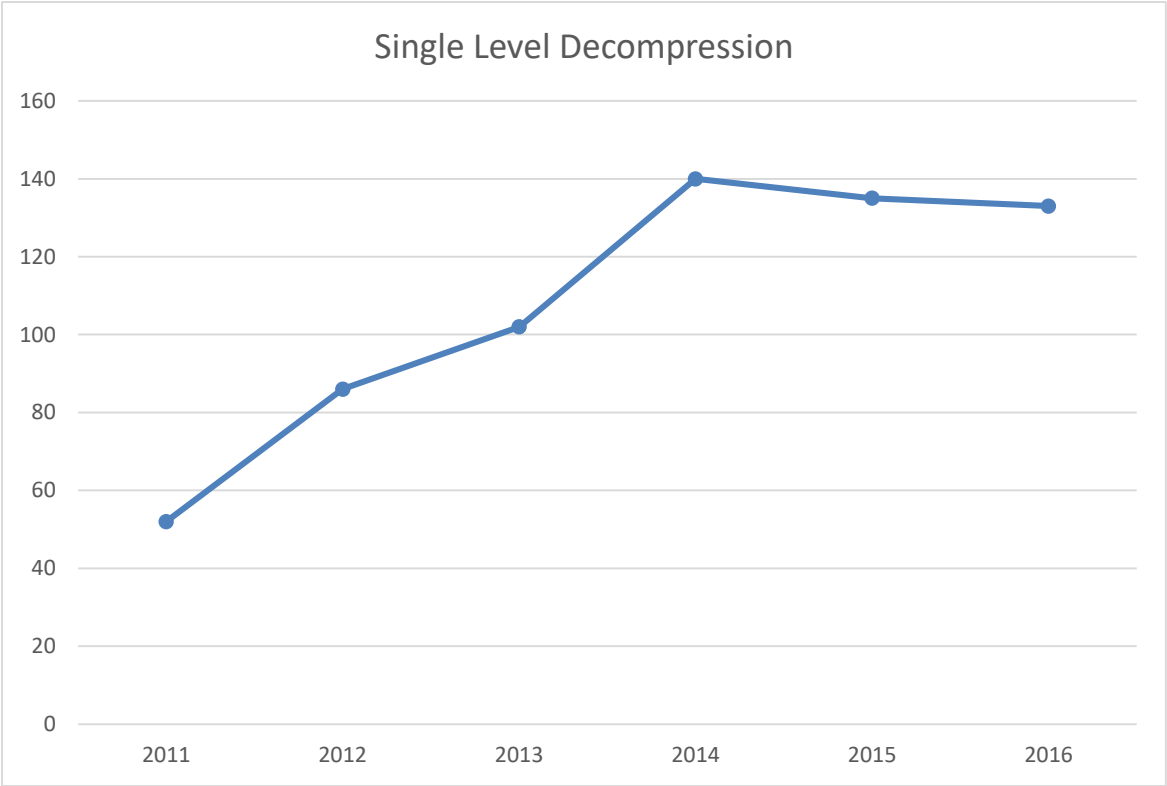
- Total cases 1136
 - 2011 - 78
 - 2012 - 169
 - 2013 - 187
 - 2014 - 221
 - 2015 - 259
 - 2016 - 227

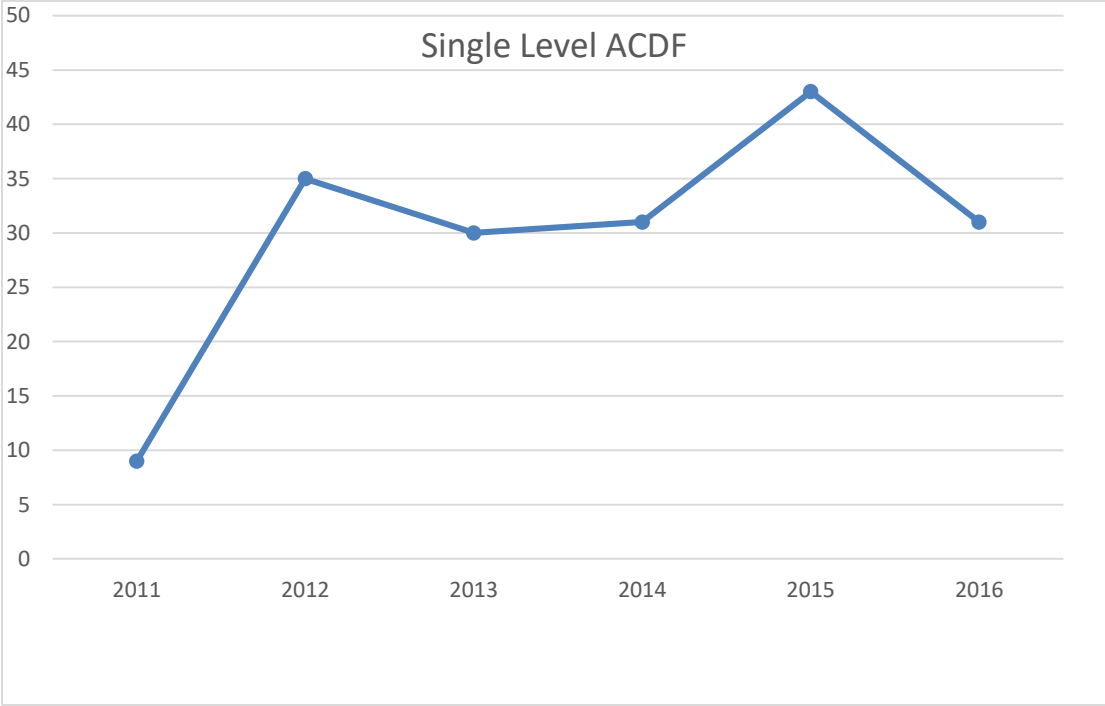


Cases Types

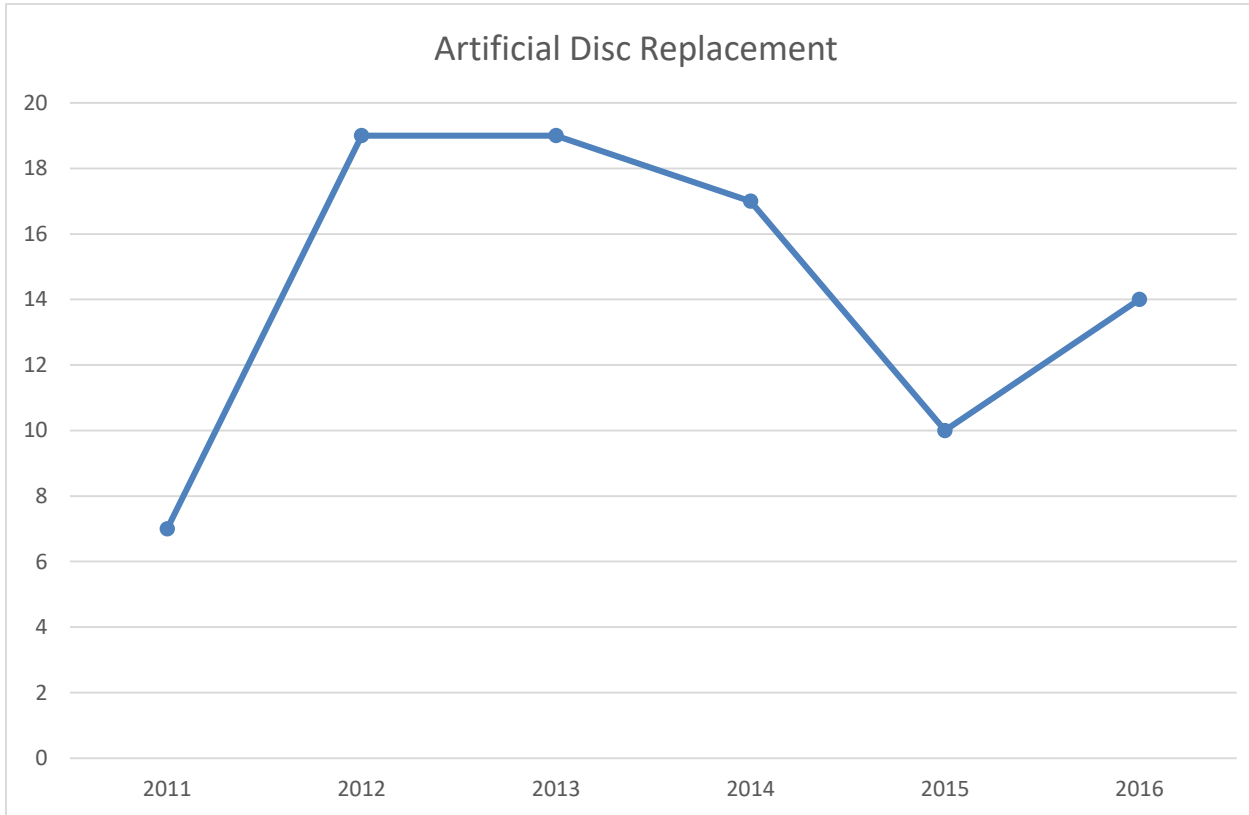
Case Type	Number	Male	Female	Average Surgical Time (min)	Average Recovery Time (hour & min)
Lumbar decompression	648	396	252	56	1:47
Lumbar decompression >2 levels	93	52	41	68	1:54
ACDF	179	92	87	54	2:03
ACDF >2 levels	81	36	45	87	3:13
ADR	86	43	43	73	2:27

Single Level Decompression



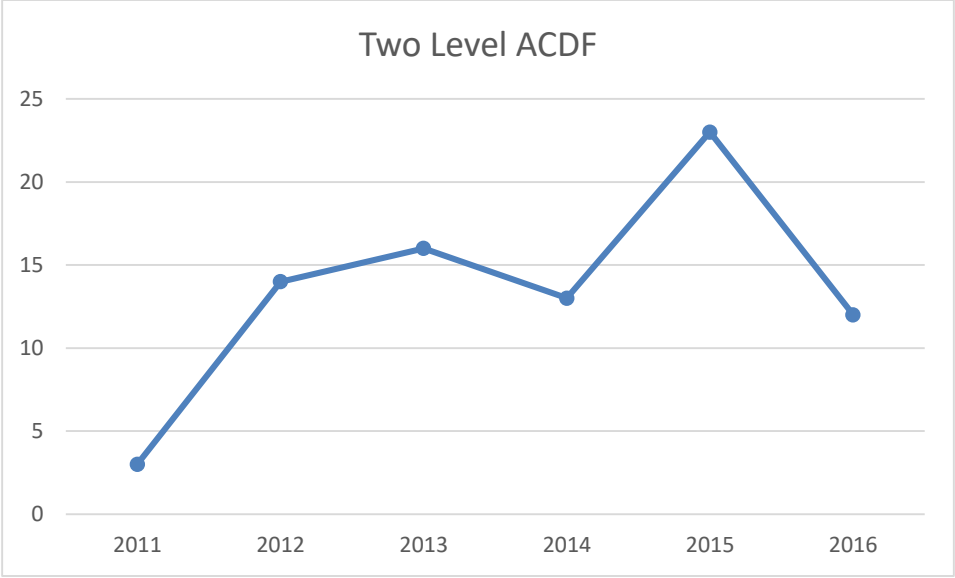


Artificial Disc Replacement

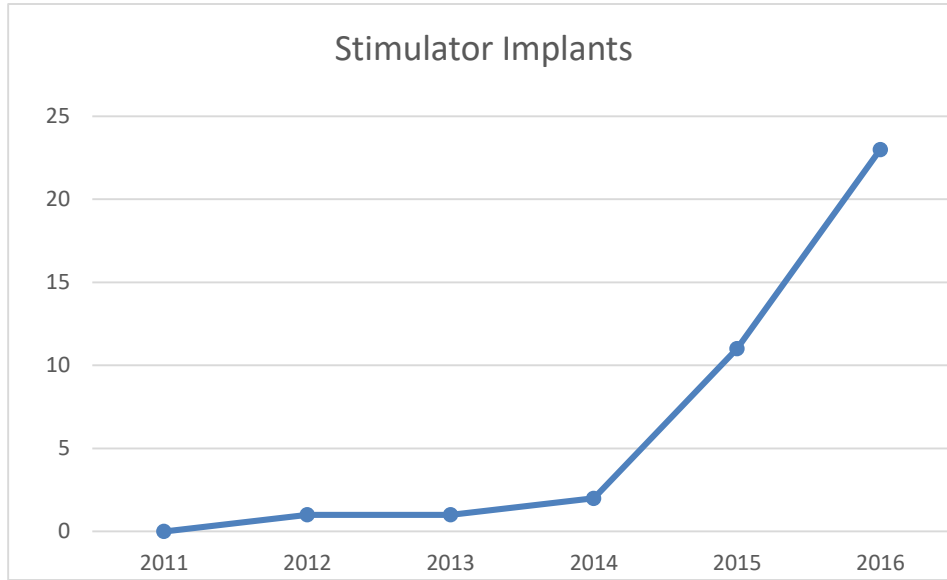


Higher Acuity Cases

Case Type	Number	Male	Female	Average Surgical Time (min)	Average Recovery Time (hour & min)
ACDF >2 levels	81	36	45	87	3:13
Spinal Cord Stimulator	38	21	17	66	2:01
Lumbar fusion	5	4	1	106	2:16



Stimulator Implants



Complications

Issue	Number	Male	Female	Average Surgical Time	
Dural tear	5	3	2	60	
Death	0				
Stroke	0				
Myocardial infarction	0				
Transfusion	0				

Transfers

- Spinal cord stimulator (3)
 - Pain control x2
 - Neurologic changes x1
- ACDF (1)
 - Anesthesia reaction

4 C's To Think About

- Care
- Competency
- Cost
- Complications

Care

- Always keep your patient safe.
- Resist the temptation to stretch your indications for financial gain.

Competency

- How do you know if you can safely perform an outpatient case safely?
- Look at YOUR own results.
 - Review YOUR outpatient data!
 - Review YOUR complications!
 - Review YOUR operative times!

Cost

- Understand the surgery center reimbursement for your cases
 - Facility reimbursement for the procedure
- Control your costs
 - Staffing time
 - Efficiency in staff scheduling/fast track options
 - Implant costs
 - Disposable associated costs
 - Shipping
 - Supply costs
 - Case cost by surgeon
 - Materials management
 - Biologic costs
 - Special equipment
 - Cell saver
 - Neuromonitoring

Cost

- Examples of a profitable vs non profitable case.
- Artificial disc replacement (higher cost) –
 - Poor contract 50% loss on case
- Double level ACDF (higher cost) -
 - Good contract 77% net profit on case
- Decompression (lower cost) –
 - Good contract 82% net profit on case

Cost Continued - Trending

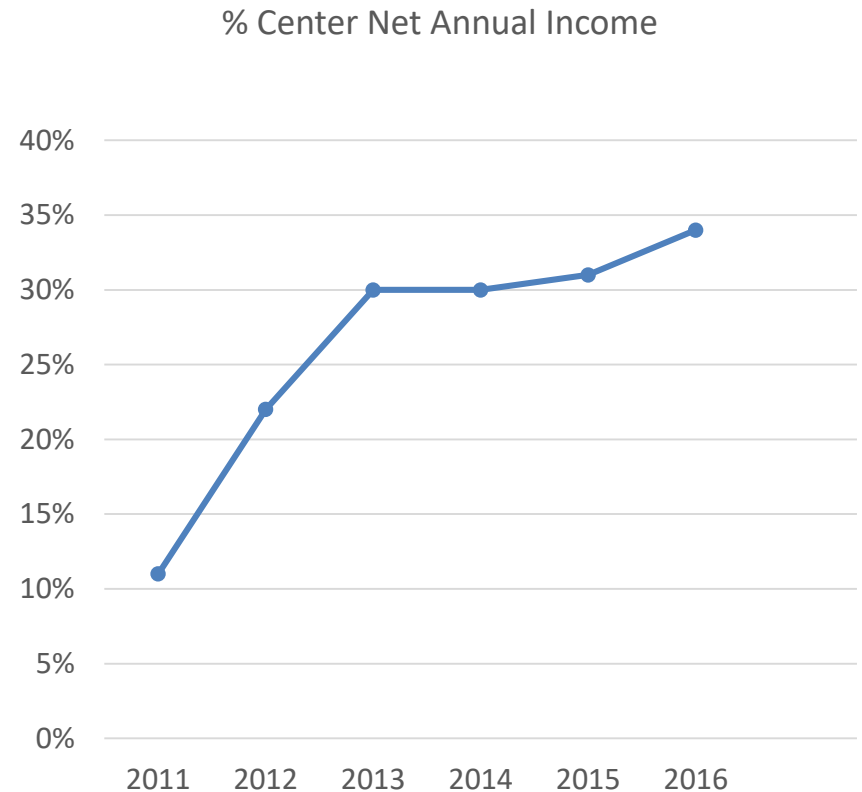
Costs per Case: Implants and Supplies 2011 to Current	% Decrease
ACDF	-44%
Artificial Disc	-21%
Decompressions	-28%

Spine Profit and Loss to the Center

Spine Payer Mix

Spine Payer Mix	OON	In-network	Medicare	MVA	Work Comp	Self Pay
2011	62%	24%	0%	7%	4%	3%
2012	58%	21%	3%	11%	1%	5%
2013	21%	61%	1%	8%	3%	3%
2014	28%	61%	1%	2%	7%	1%
2015	18%	68%	6%	4%	2%	1%
2016	13%	72%	9%	2%	3%	2%

Spine Annual Net Income



Complications

- Be prepared!
- Have a plan in place
- Vascular injury
 - ALIF/TLIF/LLIF
- Bowel injury
 - LLIF
- Cord injury
 - SCS, VCF

Conclusion

- Higher acuity spine surgery can be performed safely.
- Remember the 4C's
 - Care
 - Competency
 - Cost
 - Complications

Thank You