

Ross Dawkins, MD
University of Alabama at Birmingham
Department of Neurosurgery

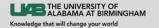




Knowledge that will change your world

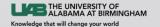
## **Disclosures**

I have nothing to disclose.



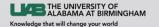
# **Background**

- Depression is more frequently found in spine patients with higher pain scores (back and leg).<sup>1-4</sup>
- Depression is associated with worse postoperative outcomes from spinal operations.<sup>5-9</sup>



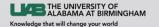
# **Hypothesis**

 Optimal management of depression in patients with spinal pathology will improve the functional outcomes following spine surgery.



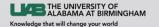
### Goals

- Step 1: See if depression is a significant comorbidity within our patient population.
- Step 2: Determine if psychiatric care for depression improves functional outcomes after spinal surgery.



### **Methods**

- Cross sectional study
- Study population: all adult patients presenting for the first time to a UAB Neurosurgery Clinic for evaluation of a spinal complaint
- Screening tool: The Center for Epidemiologic Studies Depression Scale Revised (CESD-R)



#### Brief Mental Well-Being Survey

Instructions: I am going to read a list of ways you may have felt. Please tell me how often you have felt this way <u>during</u> the past week: rarely or none of the time; some or a little of the time; occasionally or a moderate amount of time; or most or all of the time.

Or all of the time.

During the past week that would be from Parely or Some or Occasionally Meet as all

Sadness(dysphoria): Question numbers 2,4,6

Loss of Interest(anhedonia): Question numbers 8,10

**Appetite:** Question numbers 1,18 **Sleep:** Question numbers 5,11,19

Thinking / concentration: Question numbers 3,20

Guilt(worthlessness): Question numbers 9,17

Tired(fatigue): Question numbers 7,16

Movement(agitation): Question numbers 12 13

#### **Total Score's Indication of the Presence of Depression**

0-9 – very low likelihood

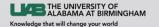
10-15 – suspicious

#### 16 or greater - diagnostic

1.	<ul><li>Have you ever been diagnosed with depression, bipolar disorder, or an anxiety disorder?</li><li>Is the disorder major depressive disorder?</li></ul>			Yes Yes	No No	Don't know Don't know
2.						
3.	. If yes:					
	а	а.	Are you currently being treated for this disorder?	Yes	No	Don't know
	b	٥.	What medications are you currently taking for this problem?			
_						
	С	>.	Do you believe the disorder is well controlled?	Yes	No	Don't know

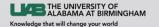
#### Methods

- CESD-R surveys were given to 142 consecutive patients in neurosurgery clinics over a 4 week period.
- Total scores were manually calculated and the answers to the final three questions were recorded.

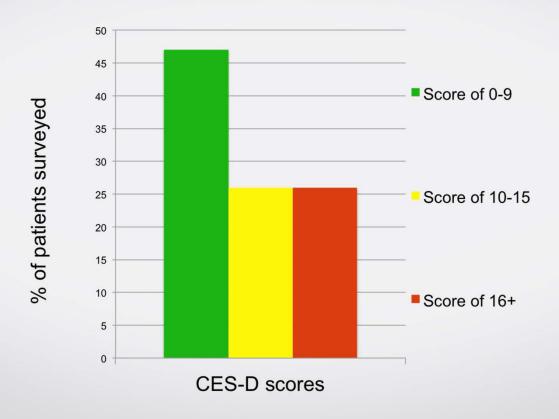


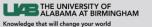
#### Results

 Of the 142 patients who were identified as potential study participants, 76 (54%) completed the survey.

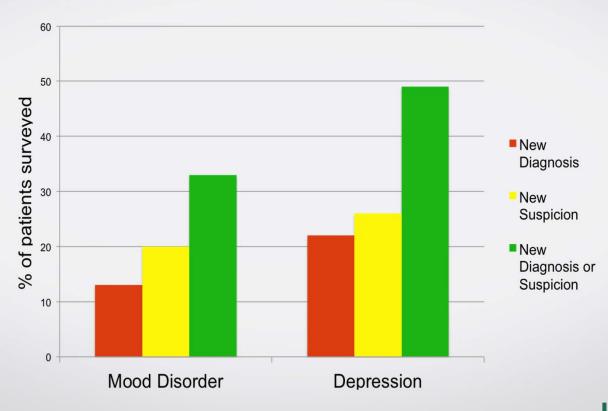


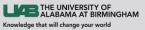
## **Results**





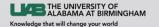
## **Results**





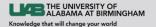
## **Conclusions**

 Depression is a common comorbidity amongst our patient population with spine pathology.



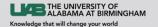
## **Next Steps**

- Step 1: See if depression is a significant comorbidity within our patient population.
- Step 2: Determine if psychiatric care for depression improves functional outcomes after spinal surgery.



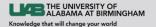
## **Next Steps**

- Screen patients for depression with CESD-R
- Potential Participants: CESD-R score16 or greater, lumbar degenerative pathology requiring decompression without internal fixation, no previous diagnosis or treatment of depression



## **Next Steps**

- Experimental Group: pre-operative psychiatric evaluation, Control Group: no pre-operative psychiatric evaluation
- Primary Outcome: patient reported outcomes



## References

1 Dersh J, Gatchel RJ, Mayer T, Polatin P, Temple OR: Prevalence of psychiatric disorders in patients with chronic disabling occupational spinal disorders. **Spine 31**:1156–1162, 2006

2 Ellegaard H, Pedersen BD: Stress is dominant in patients with depression and chronic low back pain. A qualitative study of psychotherapeutic interventions for patients with non-specific low back pain of 3-12 months' duration. **BMC Musculoskelet Disord 13**:166, 2012

3 Goode A, Cook C, Brown C, Isaacs R, Roman M, Richardson W: Differences in comorbidities on low back pain and low back related leg pain. **Pain Pract Off J World Inst Pain 11**:42–47, 2011

4 Sinikallio S, Aalto T, Airaksinen O, Herno A, Kröger H, Savolainen S, et al.: Depression and associated factors in patients with lumbar spinal stenosis. **Disabil Rehabil 28**:415–422, 2006

5Alvin MD, Miller JA, Sundar S, Lockwood M, Lubelski D, Nowacki AS, et al.: The impact of preoperative depression on quality of life outcomes after posterior cervical fusion. Spine J Off J North Am Spine Soc:2014

6Bouras T, Stranjalis G, Loufardaki M, Sourtzis I, Stavrinou LC, Sakas DE: Predictors of long-term outcome in an elderly group after laminectomy for lumbar stenosis. J Neurosurg Spine 13:329–334, 2010

7Menendez ME, Neuhaus V, Bot AGJ, Ring D, Cha TD: Psychiatric disorders and major spine surgery: epidemiology and perioperative outcomes. **Spine 39**:E111–122, 2014

8Sinikallio S, Aalto T, Airaksinen O, Herno A, Kröger H, Savolainen S, et al.: Lumbar spinal stenosis patients are satisfied with short-term results of surgery younger age, symptom severity, disability and depression decrease satisfaction. **Disabil Rehabil 29**:537–544, 2007

9Sinikallio S, Aalto T, Lehto SM, Airaksinen O, Herno A, Kröger H, et al.: Depressive symptoms predict postoperative disability among patients with lumbar spinal stenosis: a two-year prospective study comparing two age groups. **Disabil Rehabil 32**:462–468, 2010

