



The NeuroStar Outcomes Registry Update

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The NeuroStar Outcomes Registry - Dr. Scott West

- ThriveLogic TMS + NeuroHealth
- Nashville NeuroCare Therapy
- Residency - Vanderbilt Medical Center
- Board Certified 1986
- Associate Clinical Faculty-Vanderbilt School of Medicine, Department of Psychiatry
- Medical Director - St. Thomas Health Service NeuroBehavioral Unit
- Private practice -1986-present

Topics

- Overview
- Data Acquisition
- National Outcomes
- ThriveLogic Outcomes
- Conclusion
- Q&A

NeuroStar - *Indication for Use*

“NeuroStar Advanced Therapy is indicated for the treatment of Major Depressive Disorder in adult patients who have failed to receive satisfactory improvement from prior antidepressant medication in the current episode”

Contraindication

- NeuroStar TMS Therapy is contraindicated in patients with non-removable conductive metal in or near the head
- Refer to www.NeuroStar.com for complete product safety information

What is the NeuroStar Outcomes Registry?

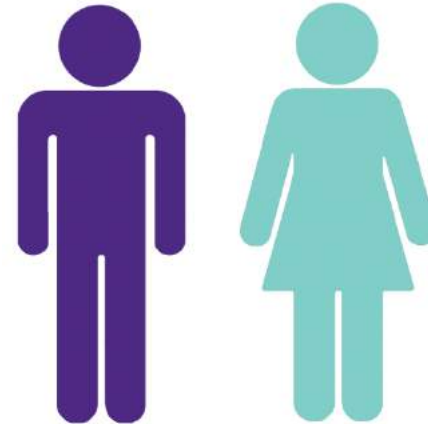
- Registry of de-identified Major Depressive Disorder patient treatment and result data
- Opted-in by NeuroStar physicians
- On track to become the largest registry of treatment resistant depression
 - STAR*D trial included 2,876 evaluable patients
 - NeuroStar Outcomes Registry is expected to have 6,000 evaluable patients by the end of 2019

Why do a NeuroStar Registry?

- Create confidence in Transcranial Magnetic Stimulation in the psychiatry and payor communities
- Quality measures/Continuous quality improvement
 - MACRA
 - JCAHO
- Continue to study Transcranial Magnetic Stimulation to advance the science and inform future areas of study and research and development.
 - New Indications
 - Alternative treatment paradigms
 - Combination therapies
- Opportunity to examine NeuroStar results in real world practice
 - Practices have used their data to build confidence in their office for referring physicians

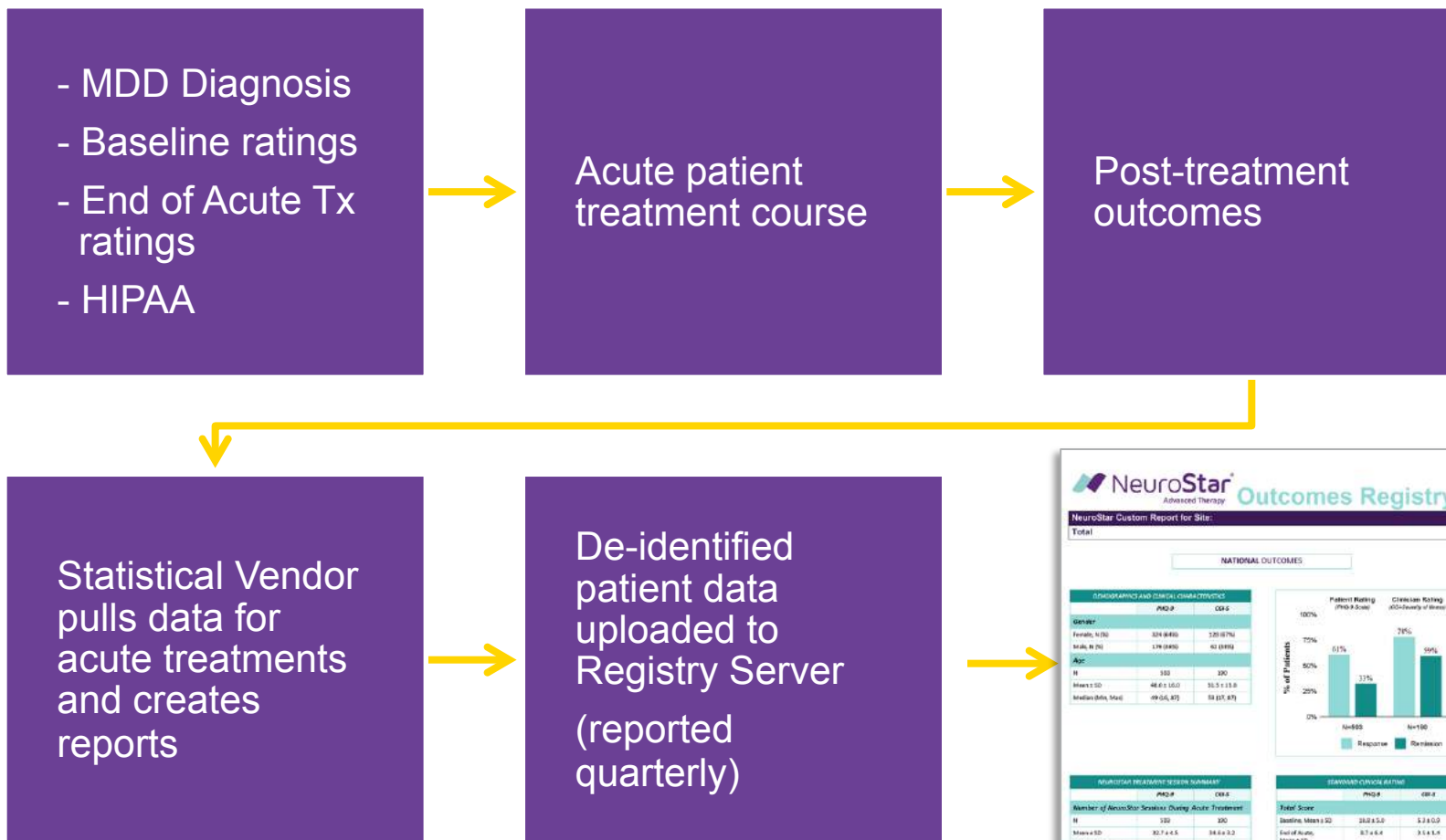
NeuroStar Outcomes Registry Data Acquisition

- Major Fields:
 - Demographic Elements
 - Treatment Elements
 - Outcome Measure Elements



- Data Sources:
 - Obligatory fields - Age, Gender
 - Automatic capture by NeuroStar - Treatment parameters
 - User entered data - Diagnosis, Ratings

NeuroStar Outcomes Registry Data Collection and Flow



NeuroStar Outcomes Registry

Patient Ratings

- Patient Rated - PHQ-9
- Clinician Rated - CGI-S
- Baseline Rating
 - first rating +/- 4 days from relative to first treatment date
- End of Acute Rating
 - last rating +/- 4 days relative to End of Acute (EOA) treatment date

NeuroStar Outcomes Registry National Results

DEMOGRAPHICS AND CLINICAL CHARACTERISTICS		
	PHQ-9	CGI-S
<i>Gender</i>		
Female, N (%)	975 (65%)	364 (65%)
Male, N (%)	530 (35%)	193 (35%)
Other, N (%)	1 (0%)	0 (0%)
<i>Age</i>		
N	1506	557
Mean ± SD	46.8 ± 15.9	48.9 ± 16.0
Median (Min, Max)	48 (0, 87)	50 (0, 87)

All results are as of April 18, 2018

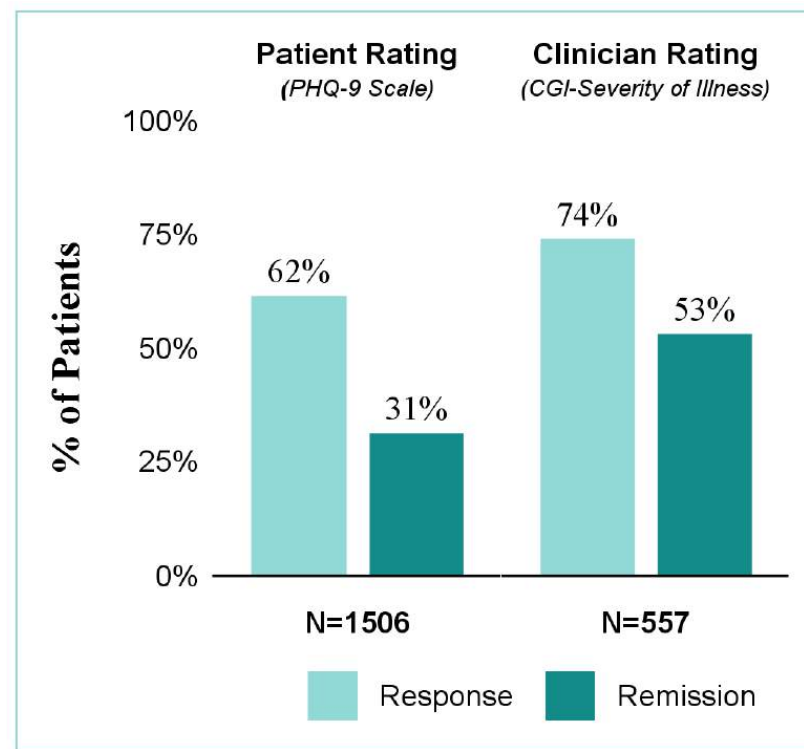
Unmonitored data – age of 0 may be reported for incorrectly entered date of birth

NeuroStar Outcomes Registry National Results

NEUROSTAR TREATMENT SESSION SUMMARY		
	PHQ-9	CGI-S
<i>Number of NeuroStar Sessions During Acute Treatment</i>		
N	1506	557
Mean ± SD	33.2 ± 4.2	35.0 ± 2.9
Median (Min, Max)	36 (20, 39)	36 (20, 39)
<i>Average Duration (days) of Acute Treatment</i>		
Mean ± SD	54.0 ± 10.5	56.7 ± 8.5
Median (Min, Max)	55 (19, 94)	56 (27, 86)
<i>Number of Pulses per Treatment Session</i>		
Mean ± SD	3415 ± 1191	3295 ± 1415
Median (Q1, Q3)	3000 (3000, 4200)	3000 (3000, 4600)

NeuroStar Outcomes Registry National Results

STANDARD CLINICAL RATING		
	PHQ-9	CGI-S
Total Score		
Baseline, Mean ± SD	19.3 ± 4.7	5.4 ± 0.9
End of Acute, Mean ± SD	8.8 ± 6.4	2.6 ± 1.4
Response Rate, % (N)	62% (927)	74% (413)
Remission Rate, % (N)	31% (471)	53% (296)



The NeuroStar Outcomes Registry - Dr. Scott West

SITE OUTCOMES

<i>DEMOGRAPHICS AND CLINICAL CHARACTERISTICS</i>	
	<i>MDD¹</i>
<i>Gender</i>	
Female, N (%)	49 (69%)
Male, N (%)	22 (31%)
Other, N (%)	0 (0%)
<i>Age</i>	
N	71
Mean ± SD	51.3 ± 16.8
Median (Min, Max)	54 (16, 82)

NATIONAL OUTCOMES

<i>DEMOGRAPHICS AND CLINICAL CHARACTERISTICS</i>	
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SITE OUTCOMES

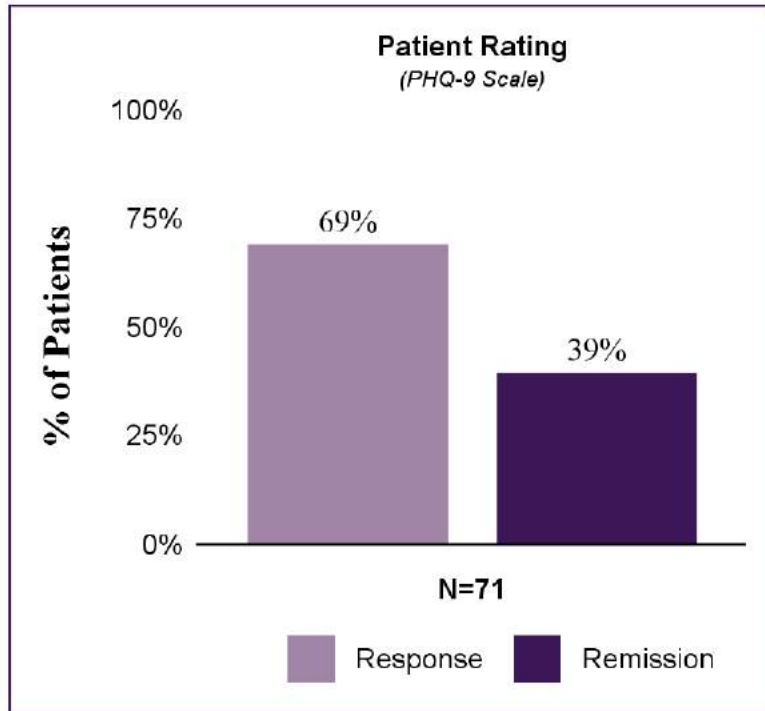
NEUROSTAR TREATMENT SESSION SUMMARY	
	MDD¹
<i>Number of NeuroStar Sessions During Acute Treatment</i>	
N	71
Mean ± SD	29.9 ± 4.4
Median (Min, Max)	30 (20, 38)
<i>Average Duration (days) of Acute Treatment</i>	
Mean ± SD	47.0 ± 10.1
Median (Min, Max)	46 (19, 69)
<i>Number of Pulses per Treatment Session</i>	
Mean ± SD	2922 ± 1056
Median (Q1, Q3)	3000 (3000, 3120)

NATIONAL OUTCOMES

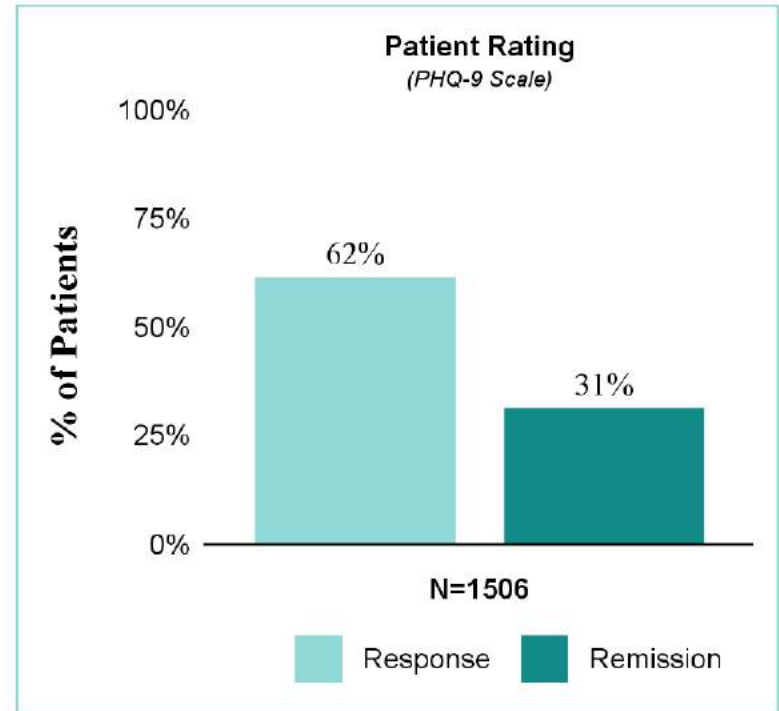
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Median (Q1, Q3)	3000 (3000, 4200)

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SITE OUTCOMES



NATIONAL OUTCOMES



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SITE OUTCOMES

STANDARD CLINICAL RATING	
	<i>Patient Clinical Rating</i>
Baseline, Mean \pm SD	16.3 \pm 6.1
End of Acute, Mean \pm SD	7.3 \pm 5.9
Response Rate, % (N)	69% (49)
Remission Rate, % (N)	39% (28)

NATIONAL OUTCOMES

STANDARD CLINICAL RATING	
	<i>Patient Clinical Rating</i>
Baseline, Mean \pm SD	19.3 \pm 4.7
End of Acute, Mean \pm SD	8.8 \pm 6.4
Response Rate, % (N)	62% (927)
Remission Rate, % (N)	31% (471)

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Keys to success

- Patient selection
- Patient engagement
- Staff training

NeuroStar Outcomes Registry

Conclusions

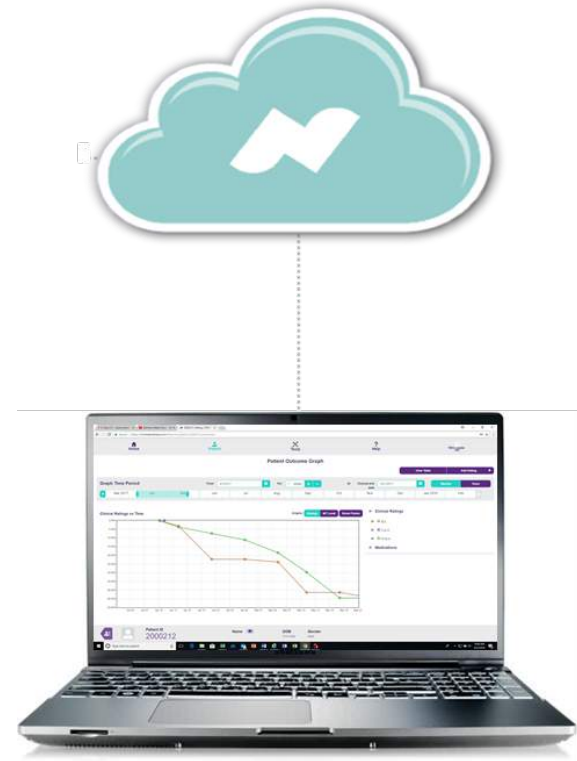
- Over 1500 patients entered in NeuroStar Outcomes Registry since Q4 2016
- NeuroStar Outcomes Registry is expected to reach 6000 outpatients from more than 50 clinical sites at 36 months.
- Treatment outcomes consistent with NeuroStar open-label study data (Carpenter, 2012)
 - 2/3 Respond
 - 1/3 Remit
- Patient treatment courses consistent with labeled indication
- TrakStar makes large scale data collection feasible

TrakStar™ Cloud

Powerful Web-Enabled Patient Data Management System

Only TrakStar Cloud can automatically and securely Track, Manage, Report your clinical success:

- **MANAGE** treatment protocols for consistent, optimized dosing .Web-based technology for centralized, easy-to-access database – available to multiple NeuroStar facilities, allowing for treatment flexibility
- **TRACK** treatment history and outcomes automatically from NeuroStar®
- **REPORT** easily produced patient records, reimbursement claims, referring physician communication



Convenient Treatment Session delivery

- Orders automatically sync to NeuroStar System



Questions & Answers



Thank you!