Using MOXO to Aide in Differential Diagnosis:
Focus on Traumatic Brain Injury

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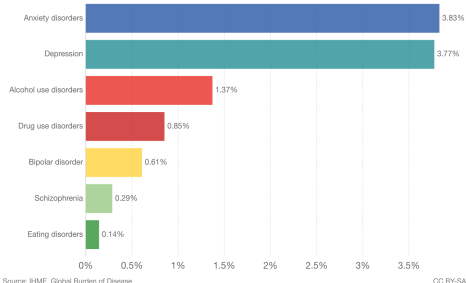f @doctorsamgoldstein

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Prevalence by mental and substance use disorder, World, 2016
Share of the total population with a given mental health or substance use disorder. Figures attempt to provide a true estimate (going beyond reported diagnosis) of disorder prevalence based on medical, epidemiological data, surveys and meta-regression modelling.

Our World in Data

Disorder	Prevalence
Anxiety disorders	3.83%
Depression	3.77%
Alcohol use disorders	1.37%
Drug use disorders	0.85%
Bipolar disorder	0.61%
Schizophrenia	0.29%
Eating disorders	0.14%

0%   0.5%   1%   1.5%   2%   2.5%   3%   3.5%

Source: IHME, Global Burden of Disease   CC BY-SA

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How distinct are these disorders from each other?

Much less so than makes me comfortable!

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Co-Occurrence/Comorbidity

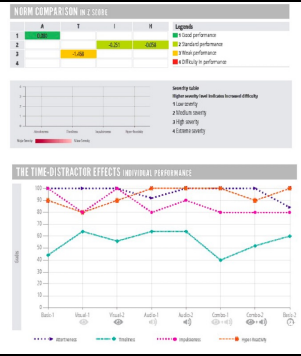| Dx	ASD	ODD	CD	Anx	Dep	LD
ADHD	59%	47%	22%	35%	41%	45%
ASD		4% to 37%	1% to 10%	42%	1.4% to 38%	70%+
ODD			42%	62%	39%	55%+

Source: Sam Goldstein Ph.D.

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Comorbidity is the

RULE

not the Exception

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Facts About Traumatic Brain Injury

- There were over 64,000 TBI-related deaths in the United States in 2020. That's about 176 TBI-related deaths every day.
- TBIs affect the lives of people of all ages. Anyone can experience a TBI.
- Research shows that falls and automobile accidents are the primary causes.
- Children and older adults are two groups in which TBI effects may be missed.
- Differential diagnosis is particularly difficult.
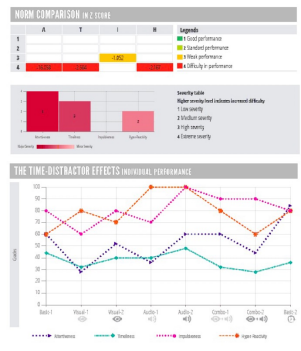- ADHD shares many symptoms with Concussion.

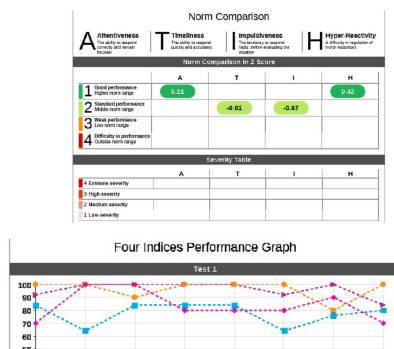6

Jeff 47 Years Old
(mild TBI)
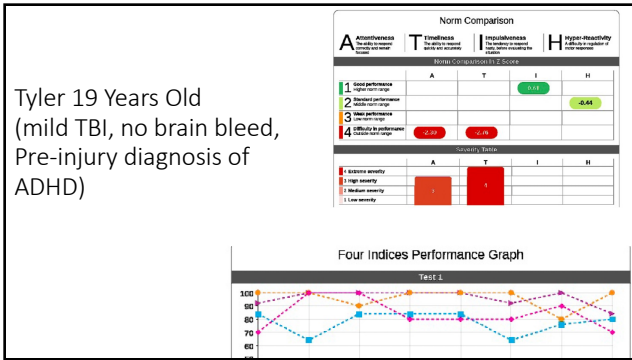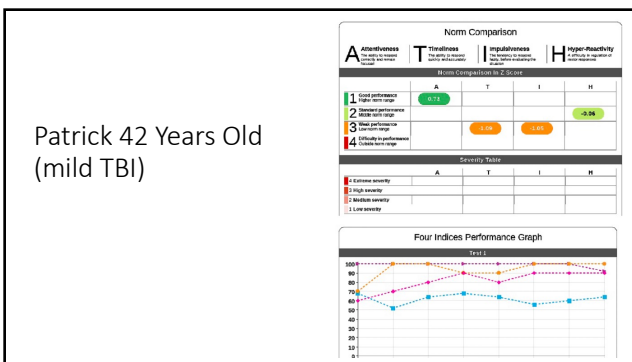
7

James 56 Years Old
(moderate TBI, brain
bleed)

8

Lani Age 28
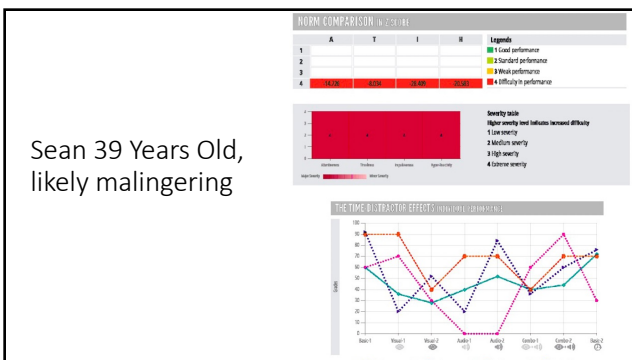(No clear TBI,
chronic pain)

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Tyler 19 Years Old
(mild TBI, no brain bleed,
Pre-injury diagnosis of
ADHD)

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Patrick 42 Years Old
(mild TBI)

11

Sean 39 Years Old,
likely malingering

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MOXO can be essential test in the post-concussion test battery.

- Aide in differential diagnosis.
- Aide in examining attention, processing speed impulsivity and frustration. All four vary in their presentation in TBI. Evaluating all four assists in treatment planning.
- Use to evaluate pre-injury challenges, post-injury.
- Aide in treatment monitoring.
- See a longer Case Study on the website: https://moxo.neurotech-solutions.com/

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Adopt a Learning to Ride a Bicycle Mindset!

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Through intelligent and ethical educational and therapeutic practices, we can foster self-discipline, mental health, resilience and build educational proficiency in all children without stealing away their dignity and hope.

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Questions?

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TEDx: https://www.youtube.com/watch?v=isfw8JJ-eWM

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