Speakers

• Allyson Rosen
• Ruth O’Hara
• Maya Yutsis
• Brian Yochim
• Geoff Kerchner
Neurocognitive Disorders

- Delirium
- Major and Mild Neurocognitive Disorder (NCD)
Neurocognitive Disorders (NCD)

• Primarily **COGNITIVE** disorders
• **Acquired** and represent **decline** (i.e. not developmental)
Neurocognitive Disorders

- Primarily **COGNITIVE** disorders
- Acquired and represent **decline** (i.e. not developmental)

- Underlying brain pathology
  - For degenerative disorders monitor consensus guidelines in addition to **DSM 5**
Updates on Neurocognitive Disorders
Updates on Neurocognitive Disorders????

NO

We can still be

Updates on Dementia
Neurocognitive Disorders (NCD) vs. Dementia

• Dementia typically refers to degenerative d/o in elderly
Neurocognitive Disorders (NCD) vs. Dementia

- Dementia typically refers to degenerative d/o in elderly
- DSM expands category to d/o of younger
  - E.g. HIV, traumatic brain injury
Major and Mild Neurocognitive Disorders (NCD)
Major NCD

- Significant Cognitive Decline
- Interfere with independence
- Not due to delirium
- Not due to other mental disorder
Major NCD vs. Dementia

- Can be single domain
  - E.g. Amnestic
  - Exception: Major NCD due to Alzheimer’s disease.
Major NCD

- Significant Cognitive Decline
- Interfere with independence
- Not due to delirium
- Not due to other mental disorder
Mild NCD

- **Moderate** Cognitive Decline
- **NOT** Interfere with independence
- Not due to delirium
- Not due to other mental disorder
Mild NCD

• Like mild cognitive impairment
• Previously:
  Cognitive Disorder
  Not Otherwise Specified
Major and Mild Neurocognitive Disorders

- Cognition: Psychometric Definition
Mild vs Major NCD
Cognitive Testing

- **Mild:** 1–2 standard deviation (SD) range (between the 3rd and 16th percentiles)
- **Major:** Below 2 SD or 3rd percentile
Test Scores

A normal distribution chart showing the percentage of scores within different standard deviation (SD) bands from the mean. The chart indicates:
- 68.26% of scores fall within one standard deviation (1 SD) of the mean.
- 95.44% of scores fall within two standard deviations (2 SD) of the mean.
- 99.74% of scores fall within three standard deviations (3 SD) of the mean.

A table below the chart provides z-scores and their corresponding percentile ranks and IQ values:

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<th>z-scores</th>
<th>-3</th>
<th>-2</th>
<th>-1</th>
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<th>1</th>
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<td>Percentile ranks</td>
<td>0.1</td>
<td>2</td>
<td>16</td>
<td>50</td>
<td>84</td>
<td>98</td>
<td>99.9</td>
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<tr>
<td>IQ</td>
<td>55</td>
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<td>85</td>
<td>100</td>
<td>115</td>
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Test Scores

- MILD
- MAJOR

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Mild vs Major NCD Cognitive Testing

- **Mild**: 1–2 standard deviation (SD) range (between the 3rd and 16th percentiles)
- **Major**: Below 2 SD or 3rd percentile

- These should not be rigidly used! Consider premorbid level, sensitivity of tests etc.

- Major and Mild exist on a continuum
Cognitive domains specified

**DSM-5:**
- Complex attention
- Executive function
- Learning & memory
- Language
- Perceptual-motor
- Social cognition

**DSM-IV:**
- Memory impairment
- Aphasia
- Apraxia
- Agnosia
- Executive dysfunction
Other Descriptors

• Possible vs Probable
• Behavioral Disturbance:
  – With: e.g. psychosis, mood, agitation
  – Without (not clinically significant)
• Severity (level of disability)
  – Mild: Instrumental ADL’s are preserved
  – Moderate: Basic ADL’s affected
  – Severe: Fully dependent
Types of Neurocognitive Disorders

• Delirium
• Major and Mild Neurocognitive Disorder (NCD)
Major and Mild Neurocognitive Disorder (NCD)

NCD due to:
Alzheimer’s disease
Vascular disease
Traumatic Brain Injury
Lewy body disease
(several others)

Other NCDs
Neurocognitive Disorders of the DSM-5
Neurocognitive Disorders of the DSM-5

Delirium
Traumatic Brain Injury

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Delirium
Differential Diagnosis of Delirium

- Major Neurocognitive Disorder
- Delirium due to a General Medical Condition
- Substance Intoxication Delirium
- Substance Withdrawal Delirium
- Delirium due to Multiple Etiologies
- Delirium NOS
Delirium Differs from other NCD

- Rapid Onset in hours to days
- Linked to Medical Condition, Substance Intoxication/Withdrawal, Medications, other causes
- May resolve completely
- Symptom length:
  - Acute- hours to days
  - Persistent- weeks to months
Delirium Diagnostic Criteria

• Key Features: Rapid and Abrupt onset of:
  – Impaired Attention
  – Lack of Awareness of environment
• Change in at least ONE Cognitive Domain:
  – Recent Memory
  – Orientation
  – Language (i.e. rambled speech, mumbling, difficult to understand)
  – Perceptual Disturbance
• Associated Features
  – Change in sleep-wake cycle
  – Change in emotional states
  – Worsening of behavioral problems in the evening
NCD due to Traumatic Brain Injury
Mild NCD due to TBI

- **Mild NCD**
  - Cognition: 3-16 %ile
  - Functional Independence: Mild decline but not impaired*

- **Onset**: Medically documented history of TBI
  (at least 1 of the criteria):
  - Loss of consciousness
  - Post-traumatic amnesia
  - Confused and disoriented immediately after the event
  - Neurological/Neuroimaging evidence, **not required**

- **Symptom Course**
  - Immediate onset following TBI or after recovering consciousness
  - Persist past acute post-injury period
  - Any cognitive domain involvement
  - Recovery Trajectory: partial or complete
  - Weeks to months

*may need assistance but not fully dependent on others
Major NCD due to TBI

• **Major NCD**
  – Cognition: <3%ile
  – Functional Independence: Impaired

• **Onset:** Medically documented history of TBI
  (at least 1 of the criteria):
  – Loss of consciousness
  – Post-traumatic amnesia
  – Confused and disoriented immediately after the event
  – Neurological/Neuroimaging evidence, **IS required**

• **Symptom Course**
  – Immediate onset following TBI or after recovering consciousness
  – Persist past acute post-injury period
  – Any cognitive domain involvement
  – Recovery Trajectory: partial or complete
  – Weeks to months
Neurocognitive Disorders of the DSM-5

NCD Associated with Lewy Body Disease

Allyson Rosen, PhD, ABPP-Cn
NCD due to LBD

• NCD
• Onset: Insidious
• Core symptoms
  – Fluctuating cognition/attention/alertness
  – Visual hallucinations-well formed and detailed
  – Parkinsonian movement develops 1 year AFTER cognitive impairment
• Suggestive features
  – Rapid eye movement (REM) sleep disorder
  – Neuroleptic sensitivity
Key Issues in NCD due to LBD

• Neuroleptic Sensitivity
  – Worsening of movement disorder and impaired consciousness

• Onset:
  – Major NCD BEFORE motor (vs. Parkinson’s)

• Probable/Possible
  – Differ in number of core and suggestive features

• Fluctuations: Existing measures
  – e.g. Ferman et al., 2004; Walker et al., 2000
Beyond DSM 5

Neurocognitive Disorders of the DSM-5: Alzheimer’s Disease

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Clinical Assistant Professor (Affiliated)
Department of Psychiatry and Behavioral Sciences
Stanford University School of Medicine
Major or Mild NCD due to Alzheimer’s disease (AD)

- Insidious onset & gradual progression
- Major NCD: 2 or more cognitive domains impaired (unlike other Major NCDs) + impaired IADLs
- Mild NCD: 1 or more cognitive domains impaired, IADLs intact
“Probable” vs. “Possible”: AD genetic mutation

• “Probable” vs. “Possible” are differentiated in part by presence of Alzheimer’s disease gene.
• This can be from family history or formal genetic testing.
Major NCD due to AD

• *Probable* AD: either one must be present:
  • Evidence of AD genetic mutation, or
  • All 3 of the following:
    – Impairment in memory + 1 other domain
    – Progressive, gradual decline
    – No other possible etiology

• Otherwise, *Possible* AD is diagnosed
Mild NCD due to AD

• Probable AD: requires evidence of Alzheimer’s gene.

• Possible AD: no evidence of AD gene, but all 3 of these factors exist:
  – Decline in memory & learning
  – Progressive, gradual decline
  – No evidence of other etiologies.
Beyond DSM 5: MCI Reference