

REDEFINING ADDICTION:

DSM-5; ICD-11; ASAM & CSAM; RDoC



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Disclosure: Dr. Crockford & el-Guebaly have nothing to disclose



Learning Objectives

- 1. Recognize the planned changes in for the definition substance use disorders in DSM-5**
- 2. Know the current ICD-11 definitions for substance use disorders and the new ASAM definition of addiction**
- 3. Consider options for updating the CSAM definition of addiction given the changes to DSM-5, ICD-11 and ASAM definitions**

DSM-IV-TR CRITERIA

12 month period of maladaptive substance use leading to:

ABUSE

(1+)

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-

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DEPENDENCE

(3+)

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CRITERIA

Use in Physically Hazardous Situations

Failure to Fulfill Major Role Obligations

Substance Related Legal Problems

Use Despite Social/Interpersonal Problems

Tolerance

Withdrawal

Larger amounts or longer than intended

Unable to cut down/control

Great deal of time spent

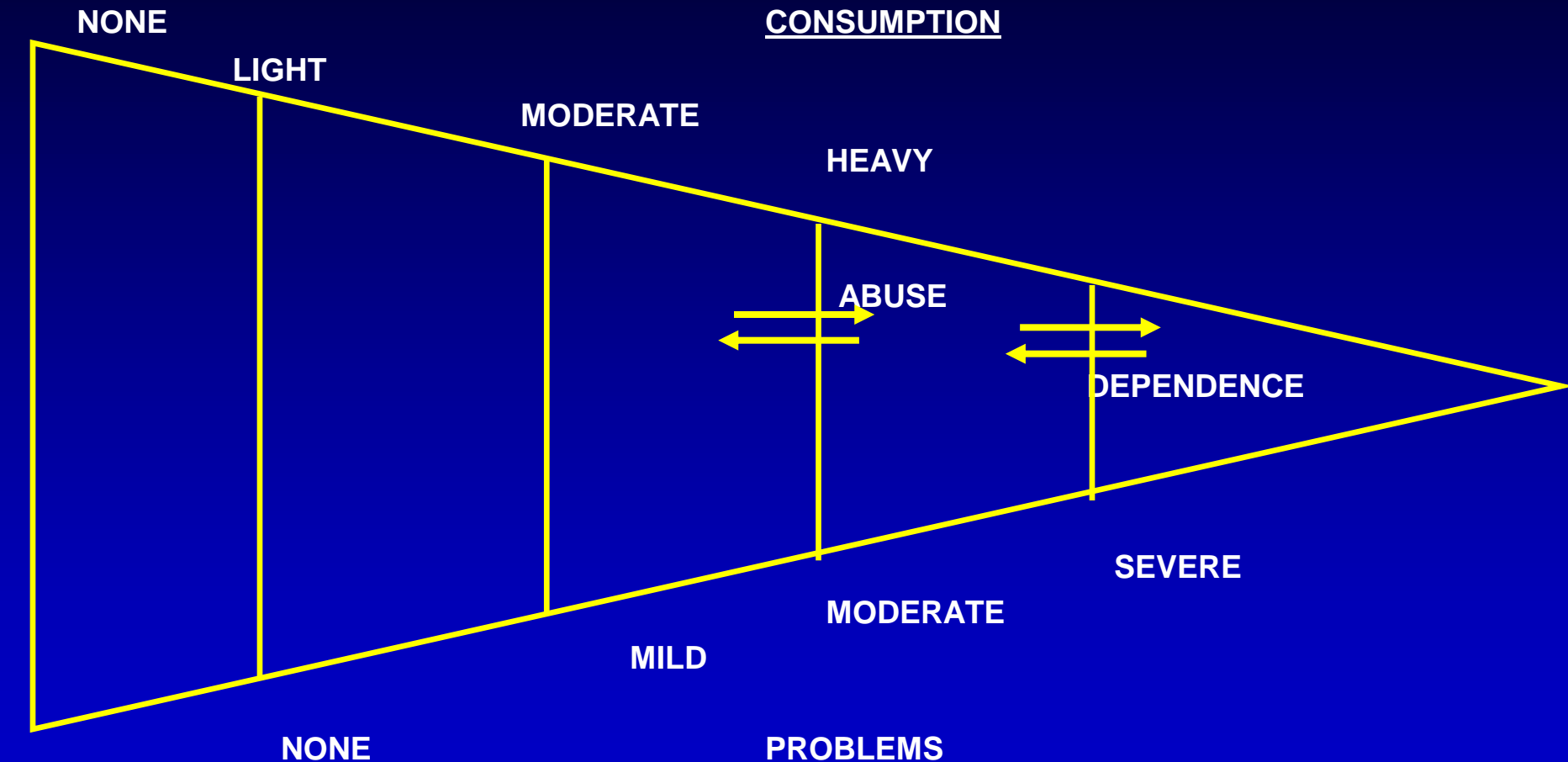
Activities given up

Continued use despite consequences

DSM-V Task Force - 2013

- Review Substance-Related Disorders section aiming for a unidimensional substance use disorder construct
 - Review the need for the Substance Abuse category
 - Consider new criteria: consumption, craving
 - Consider any criteria to be removed
 - Consider new disorders
 - Consider new name to section
 - (De-stigmatize disorder)

SPECTRUM OF DRINKERS & ALCOHOL PROBLEMS



> 18Y; 15-30% ← 1/3 → ← 1/3 →
 DSM-IV 12MO DEPENDENCE (M/F) = 6.3%/2.6% LIFETIME USE DISORDER = 13.3%
 ABUSE (M/F) = 4.7%/1.5%

1992 National Longitudinal Alcohol Epidemiologic Survey

Substance Abuse Category

- Lower reliability and validity compared to dependence
- Relationship often misunderstood between abuse and dependence
- Factor analyses suggest abuse and dependence are highly correlated where abuse matched dependence except on severity
- **PLAN:** Combine Abuse and Dependence as single category (“Substance Use Disorder”) with thresholds based on severity
 - Moderate: 2-3 criteria met
 - Severe: 4+ criteria met

Consumption (New Criterion?)

- Alcohol: At least weekly binge drinking of 4+/5+ drinks
- Drugs: At least weekly use
- **PROS:**
 - Identifies clinical group with intermittent/irregular use
- **CONS:**
 - Difficult to apply consistently
 - Difficult to measure quantities esp. illicit drugs
 - Varies based on age , sex, and ethnicity
- **PLAN:** Not added

Craving (New Criterion?)

- “Have you ever felt a strong desire or urge to use?”
- **PROS:**
 - Unidimensional with existing criteria
 - SUD structure not changed with craving added
 - Adds some information
 - Resonates highly with clinical practice
- **CONS:**
 - Not included in most datasets
 - Sensitive to item wording
 - Adds epidemiology info, but limited change to clinical practice
- **PLAN:** Added to criteria

Nicotine and Cannabis

- Nicotine: no abuse criteria
 - **PLAN:** Aligned with other substance use disorders
- Cannabis: no withdrawal criteria
 - **PLAN:** Aligned with other substance use disorders

At least 3 of the following:

1. Irritability
2. Anger or aggression
3. Nervousness or anxiety
4. **Insomnia**
5. **Decreased appetite or weight loss**
6. Restlessness
7. Depressed mood
8. Physical symptoms

Legal Problems Criterion

- **PROS:**
 - Criterion for decades
 - Applicable to some seen via legal system
- **CONS:**
 - Rare and redundant with other criteria
 - Performs differentially across sex and age groups
 - Stigmatizing
 - Not part of unidimensional substance use disorder construct
- **PLAN:** Criterion dropped

PROPOSED DSM-5 CRITERIA

12 month period of maladaptive substance use leading to:

SUD

CRITERIA

- + Use in Physically Hazardous Situations
- + Failure to Fulfill Major Role Obligations
- + Use Despite Social/Interpersonal Problems
- + Tolerance
- + Withdrawal
- + Craving
- + Larger amounts or longer than intended
- + Unable to cut down/control
- + Great deal of time spent
- + Activities given up
- + Continued use despite consequences

***0-1 = No diagnosis**

2-3 = Mild

4-6 = Moderate

7+= Severe

*Note = subject to change

Non-Substance Related Addictions

- **Some Purported Addictions**
 - Pathological Gambling
 - Internet/Video Gaming
 - Sex - “hypersexual behavior” with paraphilias
 - Eating – overlap with eating disorders and SUDs
 - Shopping – limited data only
 - Work – minimal data
 - Exercise – minimal data, overlap with eating disorder

Issues & Key Components for Inclusion

- **Social Mores vs Neurophysiology**
- **Key Components:**
 - **Clinical need**
 - **Neurophysiology** linking behavior to other SUDs
 - **Distinction from other disorders**
 - **Harm or impairment related to behaviour**
 - **Potential for treatment**
- **PLAN:** Move PG from Impulse Control to Addiction & Related Conditions, re-name “Gambling Disorder”, and eliminate legal criterion.

Potential Issues with DSM-5

- Meant to be a “living document” where new disorders can be added
 - Internet use disorder to be included in research criteria
- Diagnosis of SUD based on symptom count rather than severity or degree of impairment
- Initial field trials suggest increased diagnostic prevalence
 - 11 criteria now rather than 7
- Is inclusion of behavioral addictions a slippery slope?
 - Inadvertently may re-stigmatize

WHO's ICD-11: An International Medical Classification

ICD-10: (F10-F19)

Harmful use

A pattern of psychoactive substance use that is causing damage to health. The damage may be **physical** (as in cases of hepatitis from the self-administration of injected psychoactive substances) or **mental** (e.g. episodes of depressive disorder secondary to heavy consumption of alcohol).

Dependence syndrome

A **cluster of behavioural, cognitive, and physiological phenomena** that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state.

ICD-11: Start 2011 - 2015

- **Harmonization** between DSM-V & ICD-11?

 - only “transient tic disorder”

 - 21% conceptual differences; 78% non-conceptual; $\frac{3}{4}$ “trivial”!!

- **Favors Harmful use / Dependence dichotomy**

 - ICD Harmful use focuses on physical & mental damage

 - DSM substance abuse focuses on negative consequences (social, interpersonal, physical hazard)

 - Both ICD & DSM have 3 symptoms cutoff for dependence:

 - out of 6 for ICD & 7 for DSM; missing is “strong desire or sense of compulsive use”

- **No current attempt to define Addiction**

- **Need for consistency to code medical & psychiatric complications**

 - ICD requirement for organic, incl SUD, mood disorder = full syndrome

 - DSM “ “ for substance induced mood = prominent, persistent & predominant

- **Definitions word limit 100 words**

<http://www.who.int/classifications/icd/en/>¹⁶

CSAM: Definition of Addiction 99.10.14

A primary, chronic disease, characterized by impaired control over the use of a psychoactive substance and/or behaviour.

Clinically, the manifestations occur along biological, psychological, sociological and spiritual dimensions. Common features are change in mood, relief from negative emotions, provision of pleasure, pre-occupation with the use of substance(s) or ritualistic behaviour(s); and continued use of the substance(s) and/or engagement in behaviour(s) despite adverse physical, psychological and/or social consequences. Like other chronic diseases, it can be progressive, relapsing and fatal.

Consider adding qualifiers such as full, partial remission, etc. based on DSM IV.

Four C's:

Control
Craving

Compulsion
Consequences

ASAM's Definition of Addiction

(Short Version – adopted by CSAM Board 2011)

Addiction is a **primary, chronic disease of brain reward, motivation, memory and related circuitry.**

Dysfunction in these circuits leads to characteristic **biological, psychological, social & spiritual manifestations.**

This is reflected in person's pathologically **pursuing reward and/or relief** by substance use & **other behaviors.**

Addiction is characterized by **inability to consistently Abstain, impairment in Behavioral control, Craving, Diminished recognition of significant problems with one's behaviors & interpersonal relationships, & a dysfunctional Emotional response.**

Like other chronic diseases, addiction often involves cycles of **relapse and remission.**

Without treatment or engagement in recovery activities, addiction is **progressive** & can result in disability or premature death.

Characteristics: A B C D E

Postscripts

- A **diagnosis** of this condition must be based on a comprehensive biopsychosocial assessment.
- Awareness of the **developmental aspects** of addiction as well as the impact of **gender & socio-cultural factors** is also required.
- It is recognized that a **significant portion of society's burden attributable to misuse or harmful use** of substance, such as intoxication or traffic accidents as well as from other behaviors may occur in the absence of addiction.

The “DARKER SIDE” of Addiction

Mental Comorbidities – Barcelona’s White paper Oct ‘11

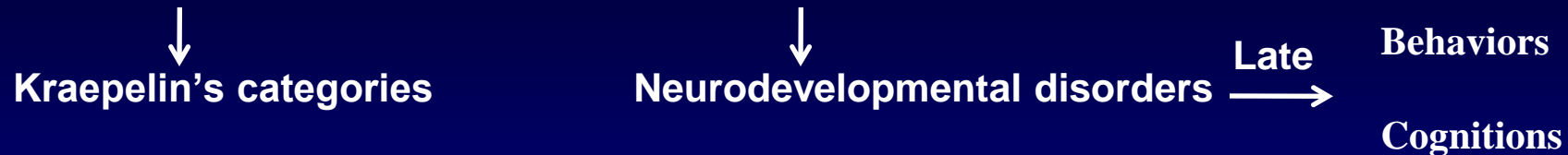
- **Epidemiology:** “the rule rather than the exception”
 - Substance use as cause of psychiatric illness (smaller)
 - Psychiatric illness as cause of substance use disorders (larger)
- **Causes of Comorbidity:**
 - coincidence
 - common genetic vulnerability
 - common neural substrate
 - other shared origins
 - traumatic stress
 - self-medication
 - environment & lifestyle

COMMON NEUROBIOLOGICAL SUBSTRATES?

SUBSTRATE	ADDICTION	MENTAL ILLNESS
Endogenous opioids	μ opioid receptors target for reward: opioids & alcohol	Borderline PD
Endogenous cannabinoids	CB 1&2 receptors & 5 endogenous ligands Marihuana	Psychosis/schizophrenia?: Increased CB1 density & \nearrow CSF anandamide -Cannabinoid normalizing frontal lobe (Freedman '08) -Depression: etiology & action of antidepressants (Gorzalka & Hill '11)
Nicotine/cholinergic receptors	Tobacco	Depression, schizotypal PD: reduced receptors expression; reduced anger & agitation (Allen '11)
Endogenous opioids & Corticotrophic Releasing Factor (CRF)	SUD comorbidity	Stress axis (HPA): PTSD, borderline PD, depression (Corominas '10)
Glutamatergic System	"Excite" transmitter Interacts with DA in drug seeking; relapse (Markou' 07)	Depression (Ketamine NMDR antagonist as antidepressant - Autry '11) Ketamine in Psychosis/Schizophrenia
Dopaminergic system	-Crucial for Reward but unclear in addiction (Volkow '11) - Circuit for Addiction or evolution of social bond/attachment? (Insel '03)	ADHD (Bush '11)

NIMH's RESEARCH DOMAIN CRITERIA (RDoC)

CLINICAL CONSENSUS VS. BIOLOGICAL DECONSTRUCTION



Disorders of the Brain? - Genetics & Epigenetics (early life events, environment)
- Neurotransmitters
- Circuitry

Back to basics! Temperaments & traits!

- Negative affect: fear, distress & aggression
- Positive affect: well-being, achievement/motivations, bonding-DA, protective ≠ SUD
- Cognition
- Social Processes
- Arousal/Regulation...Impulsivity, compulsivity

Brain disorders? we have identified Pixels not the Image!