SUBSTANCE USE AND MENTAL ILL-HEALTH IN YOUNG PEOPLE ACECHO 2024

Assoc. Prof. (adj) Enrico Cementon

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WHAT CAN THE AOD CLINICIAN DO FOR THE YOUNG PERSON WITH AOD ISSUES?

2

IDENTIFY, INTERVENE & ADVISE

Early identification

Risk factors

Emotional dysregulati… …ng disorders

→ Prevention

Early intervention

Screening & asse… …nt procedures

Management knowledge & skills

Inform drug policy

Evidence-informed advocacy re young people, AOD use & potential long-term mental health effects

↓ STIGMA ↓

3

AOD USE IN YOUNG PEOPLE CAN BE THE NORM – A DEVELOPMENTAL SPECTRUM

- •Experimental — Curiosity, novelty-seeking, risk-taking
- •Social
- •Instrumental — Peer-influenced,"Gateway"
- •Habitual — Manipulate affect, behaviour, pleasure
- •Compulsive — Reliance for coping and recreation — Salience, loss of function

From *Nowinski (1990)*

↑ age
↑ substance use
↑ risk/severity of SUD

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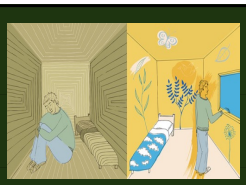
OVERVIEW



- EPIDEMIOLOGY
- PATHWAYS TO CO-OCCURRING DISORDERS
- ASSESSMENT & DIAGNOSTIC ISSUES
- INTERVENTIONS
- MODELS OF CARE
- RESOURCES

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LONG-TERM ASSOCIATION OF SUD SYMPTOMS IN ADOLESCENCE WITH PRESCRIPTION DRUG USE, PDM, AND SUD SYMPTOMS IN ADULTHOOD

11 cohorts of high school seniors surveyed in annual nationwide National Institute on Drug Abuse – funded **Monitoring the Future study:** age 18 years (study years 1976-1986) to 50 years

Severe substance use disorder (SUD) in high school → still 2 or more SUD symptoms in midlife

"Teens with SUDs cannot necessarily be expected to age out of their disorders"

McCabe SE, Schulenberg JE, Schepis TS, et al (2022)
Volkow ND, Wargo EM (2022)

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EPIDEMIOLOGY ISSUES

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AUSTRALIAN NATIONAL DRUG STRATEGY HOUSEHOLD SURVEY 2022-23

Every 3 years since 1985

21,663 Australians aged 14 years and over

Self-completion, drop-and-collect questionnaire (72%)

Online (28%)

Telephone interview (0.1%)

43.9% response rate

Excluded:

Non-private dwellings, institutional settings (AOD rehab, military, prison), homeless

Australian Institute of Health & Welfare (2024)

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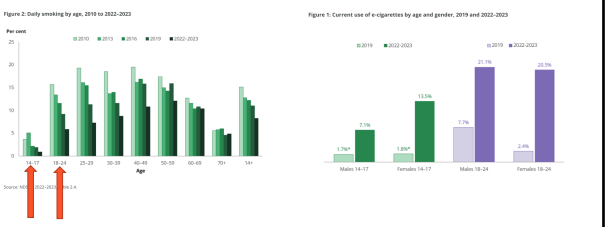
YOUTH SMOKING V VAPING



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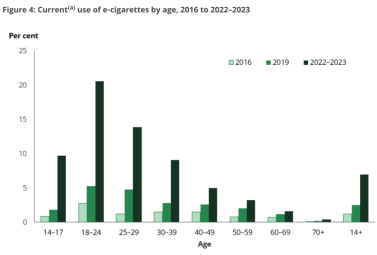
VAPING MOST COMMON IN 18-24 YEAR OLDS



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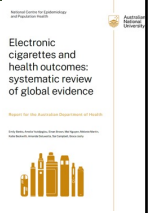
"STRONG EVIDENCE THAT E-CIGARETTES INCREASE COMBUSTIBLE SMOKING UPTAKE IN NON-SMOKERS, PARTICULARLY **YOUTH**" 2022

"and limited evidence that in the clinical setting, freebase nicotine e-cigarettes are efficacious as an aid to smoking cessation"

"cause poisoning, injuries and burns and immediate toxicity through inhalation, including seizures, and that their use leads to addiction and that they cause less serious adverse events, such as throat irritation and nausea"

"A central finding of this systematic review is the paucity of evidence regarding e-cigarettes and clinical health outcomes"

"Dual" e-cigarette & tobacco use most common



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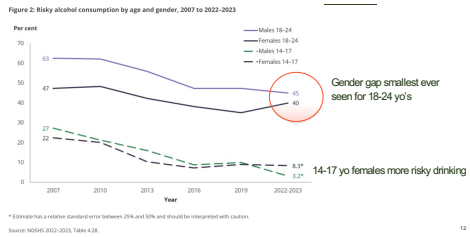
YOUNG MALES NOW **LESS** LIKELY THAN FEMALES TO DRINK ALCOHOL AT RISKY LEVELS



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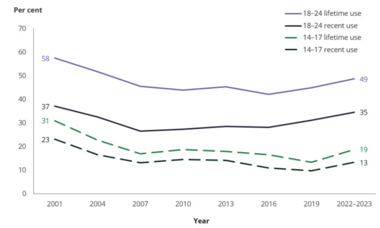
USE OF ILLICIT DRUGS REMAINS HIGHEST AMONGST YOUNG PEOPLE

Figure 3: Use of any illicit drug in Australia by age, 2001 to 2022–2023



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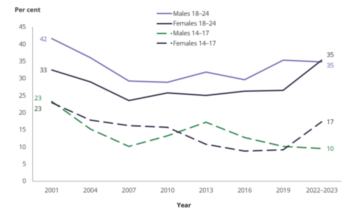
ILLICIT USE OF DRUGS HIGHER AMONG YOUNG FEMALES THAN YOUNG MALES FOR THE FIRST TIME

Figure 4: Recent[(a)] use of any illicit drug, young people aged 14–24, by gender, 2001 to 2022–2023



Increase in female use due mainly to THC & cocaine

(a) Used at least 1 of 17 classes of illicit drugs in the previous 12 months in 2022–2023. The number and type of illicit drug varied over time.

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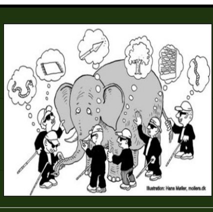
EPIDEMIOLOGY OF YOUTH DUAL DIAGNOSIS



DEPENDS ON YOUR VANTAGE POINT

Are you working in an AOD or a MH service?

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IMPLICATIONS OF COMORBIDITY

Poorer prognosis	Homelessness
Poor Rx compliance	Violence
Repeated hospitalisation	Imprisonment
Problems with rehabilitation	Early mortality
Suicide	Medical problems

Dixon L (1999)

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12 MONTH MENTAL DISORDERS FOR YOUNG PEOPLE 16 – 24 YEARS (%) IN GENERAL POPULATION

	Anxiety	Affective	Substance Use	Any
Males	9.3	4.3	15.5	22.8
Females	21.7	8.4	9.8	30.1
All young persons	15.4	6.3	12.7	26.4
All ages (16 – 85 years)	14.4	6.2	5.1	20.0

AOD disorders almost as prevalent as anxiety disorder

National Survey of Mental Health and Wellbeing 2007

- < 1 in 4 16 – 24 year olds accessed health services c.f. > 1 in 3 16 – 85 year olds
- Gap in help-seeking mainly due to substance use disorders, especially young males

Reavley NJ, Cvetkovski S, Jorm A & Lubman DL 2010

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ALSO IN THE USA: LOW TREATMENT RATES FOR YOUTH WITH MDD & SUD

JAMA Network | Open

Original Investigation | Psychiatry

Trends and Disparities in Treatment for Co-occurring Major Depression and Substance Use Disorders Among US Adolescents From 2011 to 2019

Wenhua Lu, PhD; Miguel Muñoz-Laboy, DrPH; Nancy Sohler, PhD, MPH; Renee D. Goodwin, PhD, MPH

RESULTS In total, 136 262 adolescents participated in the 2011 to 2019 surveys, among whom 69 584 (51.1%) were boys and 66 678 (49.0%) were girls, 46 548 (34.1%) were aged 16 to 17 years, and 18 173 (13.8%) were Black, 28 687 (23.2%) were Hispanic, and 74 512 (53.6%) were White. From 2011 to 2019, the annual prevalence of co-occurring MDE and SUD remained stable, at between 1.4% and 1.7%. Among adolescents with co-occurring MDE and SUD, the prevalence of treatment use for MDE only increased significantly from 28.5% in 2011 to 42.5% in 2019 (odds ratio [OR], 1.07; 95% CI, 1.02-1.11; *P* = .005), whereas the prevalence of treatment use for SUD only decreased from 4.8% to 1.5% (OR, 0.92; 95% CI, 0.85-0.99; *P* = .04). Overall, the prevalence of treatment use for both conditions fluctuated between 4.5% and 11.6%, without a significant linear trend over time (OR, 0.95; 95% CI, 0.87-1.03; *P* = .24). Extensive disparities in treatment use were found among boys for SUD and both conditions, older adolescents for MDE, Hispanic adolescents for co-occurring conditions (adjusted OR, 0.52; 95% CI, 0.27-0.98; *P* = .04), and Asian, Native Hawaiian, or Pacific Islander adolescents for MDE (adjusted OR, 0.24; 95% CI, 0.10-0.58; *P* = .002) and co-occurring conditions (adjusted OR, 0.04; 95% CI, 0.01-0.33; *P* = .003). Moving households 3 or more times in the past 12 months was associated with higher odds that adolescents received treatment for both conditions (adjusted OR, 2.52; 95% CI, 1.26-5.05; *P* = .009).

CONCLUSIONS AND RELEVANCE This survey study found that from 2011 to 2019, less than 12% of adolescents with major depression and SUD received treatment for both conditions from 2011 to 2019. Findings from this study call for expanded service provision for adolescents with co-occurring conditions, improved coordination between service delivery systems, and enhanced policy and funding support for adolescents with unmet treatment needs.

JAMA Network Open. 2021;4(10):e2130280. doi:10.1001/jamanetworkopen.2021.30280

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SUBSTANCE USE IN YOUTH MH POPULATIONS

First Episode Psychosis

30% used methamphetamine in last 12 months

Hall 2014

33% clinically significant cannabis use
6 years prior to FEP

Myles 2016

BPD

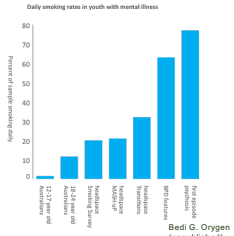
5x severe alcohol use disorder
4-9x more likely to use other drugs

Scalco 2015

MDD

46.7% cannabis and 31% alcohol use disorder

Carrol 2009



Bedi G. Orygen (unpublished)

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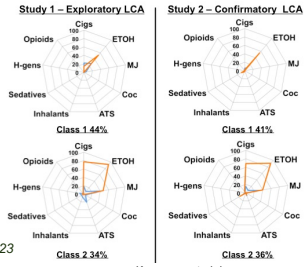
WINDOWS OF OPPORTUNITY

- 300 YP from waiting rooms
- Latent Cluster Analysis – subgroups based on drug use
- 4 groups:
  - 1. Only alcohol (41%) – youngest
  - 2. Alcohol, cigs, cannabis (36%)

From A/Prof G Bedi 2023



Karanges et al, in prep

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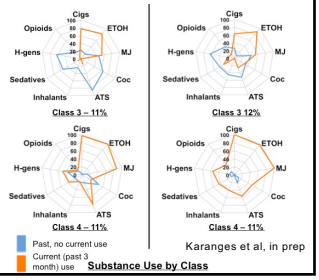
WINDOWS OF OPPORTUNITY

- 3. Past polydrug, current alcohol, cigs, cannabis (12%)
- 4. Current polydrug (11%) – highest distress
- Replicated in second sample collected earlier
- Clinically meaningful substance use – despite ↓ demand for specific treatment

From A/Prof G Bedi 2023



Karanges et al, in prep

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IMPACT OF SUBSTANCE USE DISORDER IN FIRST-EPISODE PSYCHOSIS

62% with SUD at start of 18 months treatment → 36% at completion

Reduced or cessation of use → better outcomes

Persistent use → non-compliance, treatment drop-out & poor remission

Possible relationships between substance use and outcomes

Persistent SUD → biological, psychological changes preventing FEP remission

Improvement in FEP symptoms → reduce or stop substance use

Common neurobiological factors underlying both SUD & FEP

Lambert M, Conus P, Lubman DL et al (2005)

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ANXIETY AND MOOD DISORDER IN YOUNG PEOPLE IN AOD TREATMENT

N = 100

49% concurrent anxiety or mood disorder, particularly females

Major depression 27%

PTSD 26%

Greater psychopathology, psychological drug dependence & risky behaviours

Poorer quality of life

Lubman DL, Allen N, Rogers N, Cementon E & Bonomo Y (2007)

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AETIOLOGICAL CONSIDERATIONS

Know the risk factors – they are common to all substance use and other mental health problems

Know the risk factors – there are points of early intervention

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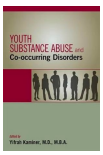
KNOWING THE RISK FACTORS FOR SUBSTANCE USE DISORDER: GENETIC TO SOCIOCULTURAL

1. Genetic
2. Early brain development
3. Environmental



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KNOWING THE RISK FACTORS: 1. GENETIC

40 – 60 % of vulnerability
Early twin & adoption studies
400 of 250,000 genes identified
Epigenetic and gene expression processes remain unclear
Frontal cortical grey matter organisation
→Executive cognitive capacities, externalising behaviours, internalising disturbances
→"Neurobehavioural disinhibition" trait correlates with SUD from childhood to adulthood
Tarter & Horner (in Kaminer ed 2016)
Physical & sexual maturation rates important

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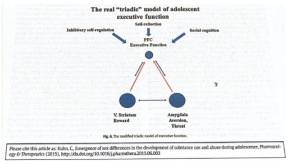
KNOWING THE RISK FACTORS: 2. EARLY BRAIN DEVELOPMENT

"Brain plasticity" – adolescent remodelling, pruning, neuromaturation
Prefrontal cortex
Fear processing
Reward cue processing
→ amplified motivation for reward & sensation-seeking
→ deficient control/inhibitory system
→ exposure to AOD in social contexts



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AGE ON INITIATION OF DRUG USE < 15 YEARS

Alcohol as an example:

In heavy drinking adolescents over 3.5 yrs:
↑ typical cortical volume decline
↓ white matter structure growth
Bourque J, Baker TE, Dagher A, et al 2016

Alcohol as "gateway" drug
↑ later adolescent alcohol & other drug misuse
↑ later drink driving & accidents
↑ risky sexual behaviours
Does delaying onset of drinking prevent later AOD disorder or protect neurodevelopment?
Kreitzberg & Pasch 2016

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KNOWING THE RISK FACTORS: 3. ENVIRONMENTAL RISK FACTORS

Maltreatment & early stress
Emotional, physical & sexual abuse
Parenting
Prenatal exposure to ATOD
Parental ATOD use & antisocial behaviour
Insecure attachments
Witnessing violence or abuse

Peer relationships
Adoption of adult behaviours
Popular belief re anxiolytic properties of AOD
Friendships with similarly dysregulated youths
Use of caffeinated drinks
Aboriginal and Torres Strait Islander background

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BOTH INTERNALISING AND EXTERNALISING PROBLEMS → AOD USE

INTERNALISING

- Poor emotion modulation
- Anxiety/depression prior to AOD use
- Self-medication coping style
- ? Legal drugs

→ cycle of AOD use & anxiety/depression in long-term

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BOTH INTERNALISING AND EXTERNALISING PROBLEMS → AOD USE

EXTERNALISING

Behavioural undercontrol
- High risk-taking
- High sociability
- Oppositionality

? Illegal drugs preference

Persistent CD/antisocial behaviour rather than AOD use → later depression

Choi, Worley, Trim et al 2016

ADHD → tobacco, alcohol & THC use – CD as mediator

Sibley, Pelham, Molina et al 2015

GABA receptor function implicated

Use of prescribed medications e.g. stimulant Rx for ADHD:
- ? protective against SUD in children, risk factor for SUD in adolescence

Kaminer Y et al 2016

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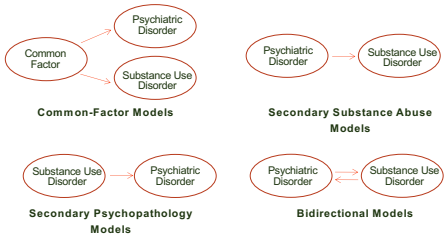
DUAL DIAGNOSIS MODELS



Mueser et al. *Integrated Treatment for Dual diagnosis*, 2003

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ASSESSMENT ISSUES IN YOUTH WITH CO-OCCURRING DISORDERS

- Adopt a welcoming, non-judgmental, hopeful & empathic approach
- Reasons for substance use
- "not here to judge"
- Explore harms occurring – connect with AOD use

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WHY DO PEOPLE WITH MENTAL ILLNESS USE DRUGS?

To feel good

To cope

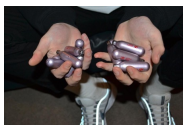
Social & peer interactions & acceptance

Denial of mental illness & its stigma

Leisure time, boredom

Self-medication

Self-harm



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HOWEVER YOUNG PEOPLE WITH MENTAL ILLNESS MAY USE DRUGS FOR SPECIFIC REASONS

- Expectation of positive & drug effects

Habit, help sleep, think clearly

- Socialise

Enjoy parties, more fun, fit in, *not to conform*

- Coping with negative affect

Forget worries & problems, cheer up

***Predictive* of substance use disorder**

Hides I, Lubman DL, Cosgrave EM et al (2008)

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ASSESSMENT & DIAGNOSIS

Is the psychiatric syndrome substance-induced or independent?

Chronological onset of symptoms in relation to substance use

Family history

Persistence of symptoms?

No substance use vs more/less substance use

Past response to Rx

SUD diagnosis in young people

DSM 5 elimination of *Substance Abuse & Dependence*

→*Dimensional approach – mild, moderate, severe SUD more applicable to YP*

Addition of behavioural addictive disorders, including internet gaming

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THE FAMILY AND THE YOUNG PERSON: REDUCE THE RISK FACTORS, STRENGTHEN THE PROTECTIVE FACTORS

Parenting style – care & control
Parental relationships
Parental psychopathology & substance use
Parental tolerance to risk-taking behaviours
Family interactions
Expressed emotion
Family breakdown
Socioeconomic status

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SCHOOL & PEER FACTORS

Quality of peer relationships
Social activities
Presence of AOD use
Bullying
Isolation at school
Engagement in school activities

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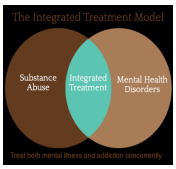
DUAL DIAGNOSIS TREATMENT ISSUES

Integration is the key



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3 PRINCIPLES OF CARE FOR CO-OCCURRING PSYCHIATRIC AND SUBSTANCE USE DISORDERS

1. **Integrated** MH & addiction care across treatment settings
2. Responsive to needs of YP exposed to **trauma** & other adverse childhood experiences
3. **Regularly assess & respond** to evolving MH needs, motivations & goals of YP

"Principles of Care for Young Adults With Co-Occurring Psychiatric and Substance Use Disorders" Spencer, Valentine, Sikov et al 2021

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WHAT IS INTEGRATED MENTAL HEALTH & ADDICTION CARE?

Bring together responses to young person's mental health and AOD issues → integrated treatment plan

Joint planning with young person +/- family/carer/s

- **individualised**
- **what does the young person want?**
- **consider developmental issues**
- **AOD harm reduction**
- **trauma-informed**
- **mutually agreed goals**
- **monitor evolving MH needs, motivations & goals**

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HOWEVER THERE ARE 2 SILOS IN AUSTRALIA

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MODELS OF COMORBIDITY TREATMENT

1. Integrated
2. Sequential
3. Parallel

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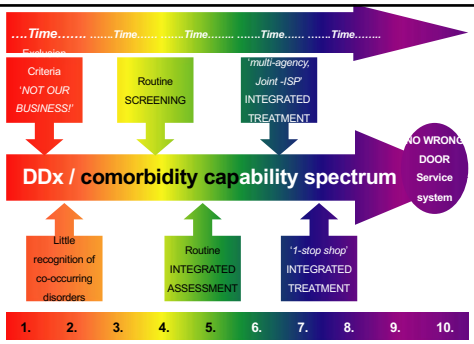

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PARALLEL TREATMENT !

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WHERE IS DUAL DIAGNOSIS IN AUSTRALIA NOW?

- High profile
  - **High prevalence, 'the expectation, rather than the exception'**
- Widespread screening & assessment
- Low adoption of integrated treatment models
  - **Psychiatrists' and other clinicians' attitudes**
  - **Stigma of AOD misuse**
  - **Reluctance to adopt 'No Wrong Door' or DD as 'core business'**
  - **Interprofessional cultural conflicts**
  - **Few resources to support government policy**

Roberts & Mayberry (2014)

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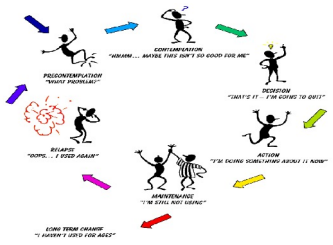
STAGES OF CHANGE

PROCHASKA & DICLEMENTE



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STAGES OF DUAL DIAGNOSIS TREATMENT

1.Engagement
Crucial
Often unrelated to clinical issues
Harm reduction
2.Persuasion
Consider brief interventions, motivational interviewing
3.Active treatment
Provide options
4.Relapse prevention

From Osher & Kofed (1989)

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YOUTH-SPECIFIC INTERVENTIONS PRINCIPLES

Early recognition → early intervention & prevention
Reduce risk factors & strengthen protective factors
Challenge of developing a social network without drug use
Outreach & opportunistic health care
Developmental focus
- Identity formation
- Separation – individuation from family
- Vocational, educational

Ethical considerations
- Confidentiality, autonomy


US Preventive Services Task Force | Recommendation Statement

June 9, 2020

Screening for Unhealthy Drug Use
US Preventive Services Task Force Recommendation Statement

US Preventive Services Task Force

Article Information

JAMA. 2020;323(22):2301-2309. doi:10.1001/jama.2020.8020

Adolescents Aged 12 to 17 Years

Because of the lack of evidence, the USPSTF concludes that the benefits and harms of screening for any type of unhealthy drug use in adolescents are uncertain and that the **balance of benefits and harms cannot be determined.**

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TRY PSYCHOSOCIAL BEFORE PHARMACOLOGICAL INTERVENTIONS

Some exceptions – psychosis, severe mood disorder, severe substance use disorder
Brief interventions – early, less severe SUD
e.g. **FRAMES**

Feedback
Responsibility
Advice
Menu
Empathy
Self-efficacy

Most therapies adaptable e.g. CBT, ACT, CAT, IPT, MI, trauma-focused therapy
Joint work with other agencies e.g. YSAS, ACP
Residential programmes e.g. MHCSS
Mutual-help groups

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FAMILY INTERVENTIONS

Psychoeducation for all co-occurring problems
Caring & supportive relationships
Problem-solving
EE reduction
Formal therapies e.g.
- Strengthening Families Program (US)
- Community Reinforcement and Family Training (CRAFT)
- Parenting Adolescents a Creative Experience Program (Aus)
- Multi-dimensional Family Therapy

Management of parental problems:
- psychopathology, anxiety, depression & substance misuse
- Anger, denial, collusion with young person
- Referral to drug-specific mutual-help groups e.g. Family Drug Help

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THE CHALLENGES OF PROVIDING PSYCHOSOCIAL INTERVENTIONS

Dearth of evidence in youth – go for it!
Engagement
- Required before other stages of treatment e.g. persuasion, active treatment
- Flexibility, outreach, match to stage of change
- Attend to young person's social needs e.g. accommodation, financial

Rx adherence
- CBT homework demands, try non-written
- ? E-resources, apps

Therapy while intoxicated
- Non-judgmental, understanding, but also challenge

Working with the family, especially if AOD or other MH problems

Carroll , Hides , Catania, Mathias, Greenwood-Smith, Lubman 2009

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ADVICE FOR PARENTS

Parental modelling

Limiting access to AOD

Parental monitoring

Quality parent-child relationship & communication: care vs control

Less permissive parenting style

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PHARMACOLOGICAL TREATMENTS

Many psychotropic drugs not evaluated in children
Principle of *start low, go slow*
Integration of medications from both mental health & substance use fields

Alcohol dependence agents
Opioid replacement therapies
Take-home naloxone
Smoking cessation therapies
Monitor for iatrogenic drug misuse

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INTERACTIONS BETWEEN PSYCHIATRIC MEDS & DRUGS OF ABUSE: YOUNG PEOPLE VULNERABLE

Alteration of therapeutic or toxic effects of drug due to co-administration

Most drugs of misuse sedating

Range of interactions reported from loss of coordination, drowsiness and sedation, delirium, cardiovascular changes, death

Lack of reports

Modern drugs – higher therapeutic index e.g. SSRIs vs TCAs

Effects of smoking & tobacco

→ Provide information, monitor carefully

Kaminer Y, Goldberg P, Connor DF (2010)

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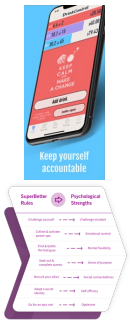
APPS

Drug info – Australian Government
Alcohol and your kids – HPA alcohol
Alcohol monitor
Drug facts for young people
Truth about drugs – online education
The alcohol app
My quit buddy
Ice – your body belongs to you
Teensphere
Smiling minds
Superbetter

From Dr M. Coleman 2018



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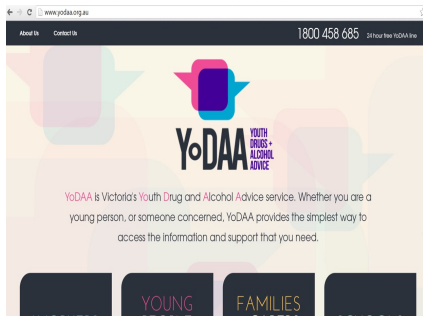

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TAKE HOME MESSAGES

Youth and co-occurring disorders in clinical settings: the expectation, not the exception	Early recognition and identification → early intervention and/or prevention	Assess for risk factors and protective factors and address them	Family issues, peer and social relationships
Integration is the key for dual disorders	Try psychosocial interventions before pharmacological, except for severe disorders	Evidence base for interventions lacking – more research please!	Look out for drug interactions – young people vulnerable

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CARE IN MIND

THANK YOU!

ENRICO.CEMENTON@MH.ORG.AU

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