

# Standardized Instruments in Screening for Substance Use Disorders

## RECOMMENDATIONS

**Among asymptomatic healthy adults, we recommend screening for substance use disorder using standardized tools at least once a year. (Moderate certainty of evidence; Strong recommendation)**

**Among asymptomatic apparently healthy adolescents, we suggest screening for substance use disorder using standardized tools at least once a year. (Low certainty of evidence; Weak recommendation)**

## Considerations

The consensus panel considered the following when formulating this recommendation:

- Unanimous with their decision to recommend screening for both asymptomatic healthy adults and adolescents with the use of standardized screening tools.
- Substance use disorders are a priority and early intervention can prevent escalation into a full blown drug disorder.
- Standardized tools such as questionnaires are cost-effective, easy to administer, and more acceptable.
- Screening was recommended by the panel to be done at least once a year to minimize costs.
- Screening for substance use disorders can be incorporated into annual check-ups for adults and school check-ups for adolescents.

## Burden of Substance Use Disorders

In 2019, the Dangerous Drugs Board estimated that 1.67 million Filipinos (1.54% of the population) aged 10 to 69 are current users of drugs, with most users belonging to the age group 18 to 59, while 4.73 million have tried drugs at least once in their life. Amongst the drugs used, cannabis or marijuana is the most prevalent (57%), followed by methamphetamine hydrochloride “shabu” at 35%.(1) Mortality rate from drug abuse disorders is 0.29 (0.22-0.38) deaths per 100,000, Disability-Adjusted Life Years of 100.85 (72.08-133.67) per 100,000, and Years Lived with Disability of 87.11 (58.85-119.34) per 100,000.(2)

Patients with drug use disorder suffer from poor prognosis of associated health disorders, either caused by their substance abuse, such as liver disease and organic brain disorders or exacerbated by the neglect of health and lack of preventive health care. In addition, diseases such as HIV/AIDS, strains of hepatitis, and tuberculosis may be transmitted by substance abuse.(3) Depending on the type of substance use, pharmacologic and cognitive behavioral therapy for specific drug abuse disorder is the first-line treatment.

Current studies suggest that best practices in addiction treatment should include the combination of both.(4)

## Benefits and Harms of Screening Tests

There were no direct studies found on the effects of screening for drug use on drug use outcomes, risky behaviors (such as alcohol or tobacco use or risky sexual behaviors), health, social, or legal outcomes. In addition, there were also no trials that addressed the harms of screening for drug use. Instead, we investigated studies on the effectiveness of interventions among those with substance abuse disorders.

## Psychosocial Interventions

### **Adolescents (3 Randomized Control Trials, N = 741; Moderate Certainty of Evidence)**

There were few trials on psychosocial interventions that focused on adolescents aged 12 to 17 years. USPSTF evidence synthesis concluded that evidence was limited and results were inconclusive. In addition, these studies did not report the effect of psychosocial interventions on drugs other than cannabis.(5)

### **Adults (19 Randomized Control Trials, N = 8,110; Moderate Certainty of Evidence)**

Increased likelihood of abstinence from drug use versus control conditions at 3 to 4 months (15 trials, RR 1.60, 95% CI 1.24-2.13; NNT 11) and at 6 to 12 months (14 trials; RR 1.25, 95% CI 1.11-1.52; NNT 17) based on trials primarily conducted in treatment-seeking populations.(5)

Greater decrease versus control conditions in the number of drug use days (19 trials; MD -0.49 day in the last 7 days, 95% CI -0.85 to -0.13) and a small but statistically significant greater decrease in drug use severity (16 trials; SMD -0.18, 95% CI -0.32 to -0.05) at 3 to 4 month follow-up.(5)

Small but statistically significant decrease in drug use severity versus controls at 3 to 4 months (17 trials, SMD -0.18, 95% CI -0.32 to -0.05;  $I^2 = 73\%$ ) but not at 6 to 12 months (13 trials, SMD -0.10, 95% CI -0.24 to 0.02;  $I^2 = 65\%$ ). (5)

Table 1. Effect of psychological Interventions among adults with substance abuse disorder in adults

Outcomes	Duration of follow up	No. of Studies	RR (95% CI)	Level of Certainty
Abstinence	3-4 Months	15	1.60 (1.24 to 2.13)	Moderate
	6-12 Months	14	1.25 (1.11 to 1.52)	Moderate
Drug Use Days	3-4 Months	19	-0.49 (-0.85 to 0.13)	Moderate

	6-12 Months	15	-0.08 (-0.30 to 0.11)	Moderate
Drug Use Severity	3-4 Months	17	-0.18 (-0.32 to -0.05)	Moderate
	6-12 Months	13	-0.10 (-0.24 to 0.02)	Moderate

**Pregnant and Postpartum (5 Randomized Control Trials, N = 946; Low Certainty of Evidence)**

No reported significant effects on drug use or health, social, or legal outcomes of drug use at 3 to 6 months after the start of the interventions.(5)

**Harm (4 Randomized Control Trials, N = 1,198; Low Certainty of Evidence)**

Four trials of psychosocial interventions reported no adverse events in either intervention or control groups. Harms were not reported in trials of psychosocial interventions, with no serious adverse events noted.(5)

**Pharmacotherapy Interventions (16 Randomized Control Trials, N = 2,827; Moderate Certainty of Evidence)**

In treatment-seeking populations with opioid use disorder, naltrexone (12 trials; RR 0.73, 95% CI 0.62-0.85; NNT 5.3) and opioid agonist therapy with methadone or buprenorphine (4 trials; RR 0.75, 95% CI 0.59-0.82; NNT 2.9) were associated with decreased risk of drug use relapse compared with placebo or no pharmacotherapy.(5)

Naltrexone and methadone/buprenorphine therapy were also associated with increased likelihood of retention in substance use treatment (9 trials; RR 1.71, 95% CI 1.13-2.49; NNT 6.7 and 7 trials; RR 2.58, 95% CI 1.78-4.59; NNT 2.6 respectively).(5)

Table 2. Effect of pharmacological Interventions among adults with substance abuse disorder

Treatment	Outcomes	No. of Studies	RR (95% CI)	Level of Certainty
Naltrexone	Relapse	12	0.73 (0.62 to 0.85)	Moderate
	Retention in Treatment	9	1.71 (1.13 to 2.49)	Moderate
Opioid Agonist	Relapse	4	0.75 (0.59 to 0.82)	Moderate
	Retention in Treatment	7	2.58 (1.78 to 4.59)	Moderate

**Harm (15 Randomized Control Trials, N = 2,284; Low Certainty of Evidence)**

There was no difference between naltrexone versus placebo or versus no naltrexone in the risk of withdrawal due to adverse events (3 trials; RR 1.54; 95% CI 0.35-8.31; I<sup>2</sup> = 0%). There was no difference between buprenorphine versus placebo in the risk of serious adverse events (2 trials; RR 0.32, 95% CI 0.09 -1.12; I<sup>2</sup> = 0%); buprenorphine

was associated with increased risk of constipation (2 trials; RR 2.36, 95% CI 1.16-4.92;  $I^2 = 0\%$ ; ARD 12%, 95% CI -5 to 41). Harms were not reported in the two trials of methadone.(5)

## Diagnostic Performance of Screening Tests

### Adolescent (11 studies, N = 13,330; Low Certainty of Evidence)

Most studies focus on the detection of cannabis use. The USPSTF determined the evidence on the accuracy of screening in adolescents to be inadequate given the limited number of studies on individual tools and the lack of information on the accuracy of tools for detecting use of drugs other than cannabis.(6)

Sensitivity for detecting any cannabis use or unhealthy use ranged from 0.68 to 0.98 (95% CI 0.64-0.99) and specificity ranged from 0.82 to 1.00 (95% CI 0.80-1.00). Sensitivity for detecting cannabis use disorders ranged from 0.71 to 0.98 (95% CI 0.41-1.00) and specificity ranged from 0.79 to 0.95 (95% CI 0.77-0.98).(6)

### Adults (12 studies, N = 42,062; Moderate Certainty of Evidence)

The sensitivity of direct tools for detecting unhealthy use of “any drug” (including illicit drugs and nonmedical use of prescription drugs) in the past month or year ranged from 0.71 to 0.94 (95%CI, 0.62-0.97), and specificity ranged from 0.87 to 0.97 (95% CI, 0.83-0.98). Direct tool sensitivity for detecting abuse or dependence or a use disorder related to “any drug” ranged from 0.85 to 1.00 (95% CI, 0.75-1.00) and specificity ranged from 0.67 to 0.93 (95% CI, 0.58-0.95).

Screening tools had higher sensitivity for detecting unhealthy drug use and drug use disorders related to “any drug” (most of which was cannabis), cannabis, heroin, and stimulants than for detecting unhealthy drug use or drug use disorders related to nonmedical use of prescription drugs, including opioids or sedatives (range 0.38-0.96, 95% CI 0.29-0.99) but specificity was comparable (range 0.79-1.00, 95% CI 0.71-1.00).(6)

### Pregnant and Postpartum Women (5 studies, N = 946; Low Certainty of Evidence)

The detection of any prenatal use of drugs using direct tools ranged from 0.37 to 0.76 (95% CI 0.24-0.86) and specificity ranged from 0.68 to 0.83 (95% CI 0.55-0.91). The indirect tool Parents Partner Past Pregnancy reported high sensitivity 0.87 (95% CI 0.71-0.95) and high specificity 0.76 (95% CI 0.70-0.82) for detecting the combined outcome of any prenatal use of drugs or alcohol.(6)

Table 3. Diagnostic Performance of screening tests by interview questions for substance abuse.

Subgroup	No. of Studies	Outcomes	Sensitivity	Specificity	Level of Certainty
Adolescent	11	Cannabis use	0.68 to 0.98 (0.64-0.99)	0.82 to 1.00 (0.80-1.00)	Low

		Cannabis use Disorder	0.71 to 0.98 (0.41-1.00)	0.79 to 0.95 (0.77-0.98)	
Adults	12	Drug Use	0.71 to 0.94 (0.62-0.97)	0.87 to 0.97 (0.83-0.98)	Moderate
		Drug Use Disorder	0.85 to 1.00 (0.75-1.00)	0.67 to 0.93 (0.58-0.95)	
Pregnant and Postpartum	5	Prenatal Drug Use (Direct tools)	0.37 to 0.76 (0.24-0.86)	0.68 to 0.83 (0.55-0.91)	Low
		Prenatal Drug Use (Indirect Tools)	0.87 (0.71-0.95)	0.76 (0.70-0.82)	

**Cost Implication**

Several systematic reviews have looked at the cost effectiveness of interventions and programs that deal with substance abuse.(7-10) Interventions on substance abuse, whether government mandated programs on offenders (7) or in hospital treatment (8) were found to be cost-effective. However, there are no cost-effectiveness studies that estimate the costs or cost-effectiveness of screening by interview questions.

Table 4: Resource Table for Substance Abuse Screening and Confirmatory Tests

Parameter	Screening intervention		Confirmatory Tests	
	<i>ASSIST<sup>a</sup></i>	<i>DAST-10<sup>a</sup></i>	<i>Biologic Drug Test of Drug use (Amphetamine and Marijuana)</i>	<i>Drug Dependency Examination</i>
Unit cost of screening intervention Philippine Peso (PHP)	<b>Free</b>	<b>Free</b>	<b>250-450</b>	<b>0<sup>b</sup> - 10, 000<sup>c</sup></b>

a: AUDIT, DAST-10 test and manuals used by Department of Health Dangerous Drugs Abuse Prevention and Treatment Program are downloadable and free

b: Free DDE from programs of Bridges of Hope Inc.

c: Range is based on psychologists' and psychiatrists' quotation rates

**Equity, Acceptability, and Feasibility**

Findings of one study (11) reported on various behaviors of the patient with problem recognition. Among the participants, internalized stigma (i.e., self-stigma) was common among their narratives and was closely linked to problem recognition. The study also suggests that people with substance use disorder may be consciously modifying their substance use behaviors in order to circumnavigate negative consequences and thus not being able to acknowledge their alcohol or drug use as problematic. This suggests that innovative approaches that increase awareness of problematic alcohol and drug use and connects people to treatment services like Screening, Brief Interventions, and Referral to Treatment (SBIRT) contributes to an efficacious practice.(12)

One study (13) found that patients, primary care providers, and medical assistants unanimously agreed that identifying and addressing substance use in primary care was important due to its negative impact on overall health, co-occurring conditions, and treatment adherence. For patients, barriers to screening centered around a perceived lack of rapport with providers, which contributed to concerns about trust, judgment, and privacy. For primary care providers and medical assistants, barriers included lack of comfort, training, and preparedness to address screening results and offer treatment.(13)

A study on Philippine programs and policies that aims to improve the assessment and management of drug dependence in the country concluded that there is a need to develop a bigger pool of health professionals that can manage drug use disorders.(14) No local studies were found on equity regarding substance abuse screening.

### Recommendations from Other Groups

Table 5. Summary of Recommendations from Other Groups

Regulatory Agency	Recommendation
Substance Abuse and Mental Health Services Administration (SAMHSA) (15)	Recommends universal screening for substance use (including alcohol), brief intervention, and/or referral to treatment (known as SBIRT) as part of routine health care, including during pregnancy.
USPSTF (16)	Recommends screening by asking questions about unhealthy drug use in adults aged 18 years or older. Screening should be implemented when services for accurate diagnosis, effective treatment, and appropriate care can be offered or referred ( <i>B recommendation</i> ). The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for unhealthy drug use in adolescents ( <i>I statement</i> ).
American Academy of Pediatrics (17)	Recommends screening adolescents through their early 20s for substance use (including tobacco and alcohol) at every annual physical examination as well as screening adolescents who present to emergency departments or urgent care centers; report cigarette smoking; have depression, anxiety, or other mental health conditions associated with substance abuse; or exhibit school, legal, or social problems or other behavioral changes.

## References

### I. Burden of Substance Use Disorders

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### II. Benefits and Harm of Screening

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### III. Diagnostic Performance of Screening Test

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### IV. Cost Implication

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### V. Equity, Acceptability, and Feasibility

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#### **VI. Recommendations from Other Groups**

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