The Evolving Role of Pharmacists in Early Identification and Intervention for Alcohol Use Disorder- A Review of SBIRT Implementation

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1. Abstract

Alcohol Use Disorder (AUD) is a chronic, relapsing condition characterized by problematic alcohol consumption leading to significant physical, mental, and social consequences. Globally, AUD contributes to a considerable burden of disease, disability, and mortality, yet a large proportion of affected individuals remain undiagnosed or untreated due to limited access to specialized care and social stigma. Early identification and timely intervention are therefore essential to reduce progression to severe alcohol dependence.

Community-based screening approaches help detect risky drinking behaviors in general populations where individuals frequently interact with healthcare providers. Screening, Brief Intervention, and Referral to Treatment (SBIRT) is an evidence-based, structured model designed to screen individuals for risky alcohol use, provide brief motivational counseling, and facilitate referral to specialized treatment when required. Integrating SBIRT into various community healthcare settings increases accessibility of preventive services and supports early intervention.

Clinical pharmacists play a crucial and emerging role in implementing SBIRT due to their accessibility, expertise in medication therapy management, and strong patient counseling skills. Pharmacist-led SBIRT interventions have demonstrated improvement in alcohol risk identification, reduction in harmful consumption, enhanced patient education, and better continuity of care through appropriate referrals.

Expanding the involvement of clinical pharmacists in SBIRT delivery can significantly strengthen public health efforts against AUD. Future perspectives include establishing standardized training programs, policy support, and wider integration of pharmacists in collaborative primary care models to improve screening uptake, treatment linkage, and overall health outcomes in the community.

Keywords
Alcohol Use Disorder, SBIRT, Screening, Brief Intervention, Referral to Treatment, Clinical Pharmacist, Public Health, Community Intervention.

2. Introduction

2.1 Definition and Background

Alcohol Use Disorder (AUD) is a chronic, relapsing medical condition characterized by a problematic pattern of alcohol consumption leading to significant impairment or distress. It includes hazardous use, harmful use, and dependence, with features such as craving, loss of control, tolerance, and withdrawal. Globally, alcohol is one of the most common psychoactive substances, widely used for social and cultural reasons. However, harmful use can result in major physical, psychological, and socioeconomic consequences.

AUD is recognized in DSM-5 and ICD-11 as a spectrum disorder that requires early identification and timely intervention to prevent the progression to dependence. [1-3]

2.2 Burden of Alcohol Use Disorder

Global Burden:

- WHO estimates indicate that ~400 million people (≈7% of adults ≥15 years) live with alcohol use disorders worldwide.
- Alcohol contributes to 3 million deaths every year and 132 million DALYs lost globally.
- It is a leading risk factor for premature mortality among adults aged 15–49 years.

Indian Burden (National / ICMR & National Surveys)

- India has ~160 million alcohol users, with a rising trend in hazardous and dependent drinking.
- Prevalence is significantly higher in men (≈25–33% hazardous drinkers) in many state surveys.
- Alcohol-related deaths and hospitalizations continue to rise, placing major stress on healthcare systems and community welfare.

ICMR has published Standard Treatment Workflows (STW) for AUD and emphasizes community-based screening for early detection. [3]

2.3 Rationale for SBIRT Approach

Despite its high prevalence, AUD often remains undiagnosed, especially at early stages. Most people with risky drinking do not actively seek help, and traditional treatment services mainly reach those with severe dependence.

Therefore, a practical and scalable approach is needed in primary care, emergency departments, and community settings like pharmacies.

SBIRT (Screening, Brief Intervention, and Referral to Treatment) provides:

- Early identification using short, validated screening tools (e.g., AUDIT-C).
- Brief motivational intervention to reduce hazardous use before dependence develops.
- Streamlined referral for those requiring specialized de-addiction care.

2.4 Objectives of the Review

- To review current evidence on the SBIRT model as a public health strategy for Alcohol Use Disorder.
- To highlight the important role of pharmacists in community-based screening, brief intervention, counselling, medication review, and referral.
- To support implementation of SBIRT in Indian healthcare systems, emphasizing its feasibility, accessibility, and patient-centered approach. [2-6]

3. Epidemiology of Alcohol Use Disorder

3.1 Global Prevalence

According to the WHO Global Status Report, approximately 400 million individuals (≈7% of adults ≥15 years) are living with Alcohol Use Disorders (AUDs) globally.

Alcohol consumption contributes to ~3 million deaths annually, which is 5% of all global deaths.

Responsible for 132 million DALYs lost, making alcohol the leading risk factor for premature mortality in adults aged 15–49 years.

3.2 National Scenario (India)

India is home to ~160 million alcohol users, with a rising pattern of hazardous and dependent drinking, especially among young males.

NFHS-5 reports that 18–32% of men consume alcohol, with higher rates in certain states such as Telangana and Andhra Pradesh.

NCBI and ICMR-supported studies report:

- Nearly one-third of male drinkers fall into hazardous/harmful category.
- Alcohol dependence affects ~5–7% of drinkers.

3.3 Regional Data (e.g., Warangal, Telangana)

Telangana shows higher-than-national-average alcohol use, reflecting cultural and socioeconomic factors.

Community and district-level studies around Warangal indicate:

- Increasing binge drinking among males aged 20–45 years.
- Alcohol-related admissions in local hospitals for pancreatitis, liver disease, trauma, and alcohol-withdrawal emergencies. [5-7]

4. Understanding the SBIRT Model

4.1 Overview of SBIRT

SBIRT stands for:

S – Screening (Quick assessment using validated tools to detect risky drinking).

B – Brief Intervention (5–15minute motivational counselling to encourage reduction of alcohol use).

RT – Referral to Treatment (Linking high-risk or dependent individuals to specialized de-addiction services).

Origin & Endorsement:

Developed in US public health system; strongly endorsed by WHO, CDC & SAMHSA as an effective strategy to reduce hazardous drinking.

Adaptable to primary care, pharmacies, and community health settings.

4.2 Screening Tools (AUDIT, CAGE, ASSIST)

AUDIT (Alcohol Use Disorders Identification Test) – 10-item WHO tool

Provides risk stratification:

- 0–7: Low-risk
- 8–15: Hazardous
- 16–19: Harmful
- ≥20: Probable dependence → Referral needed

AUDIT-C — shorter 3-item version for quick screening.

CAGE questionnaire — widely used in clinical settings.

CRAFFT — designed for adolescents.

ASSIST — WHO tool for multi-substance screening, including alcohol.

Screening Duration: usually < 2–5 minutes in routine workflow.

4.3 Brief Intervention (Motivational Counseling)

Key communication strategies:

- Motivational Interviewing (MI) → empathy, rapport building.

- Personalized feedback on screening results.
- Risk communication: linking alcohol use with health harms.
- Goal-setting: negotiated, realistic reduction plan.
- Enhancing self-efficacy: supporting patient's confidence to change.
- Typical Duration: 10–15 minutes.
- Brief Intervention is most effective for hazardous or harmful drinkers (AUDIT 8–19).

4.4 Referral to Treatment

Referral criteria include:

- AUDIT ≥ 20.
- Clear signs of dependence, withdrawal, or severe physical/psychiatric comorbidities.
- Repeated ED visits related to alcohol.

Referral Pathways:

- Government and private de-addiction centers.
- Psychiatry or addiction specialists.
- NGOs and community support programs.
- Partial hospitalization or inpatient detox if needed.
- Follow-up & Relapse Prevention.
- Scheduled follow-up visits (weekly → monthly).
- Support groups (AA, counselling sessions).
- Pharmacotherapy (where prescribed): Naltrexone, Acamprosate.
- Monitoring triggers & coping strategies. [7,8]

5. Role of Clinical Pharmacists in SBIRT

5.1 Screening and Identification

Pharmacists can perform routine screening during prescription reviews or patient interactions using standardized, quick tools such as:

- AUDIT / AUDIT-C
- CAGE questionnaire

Community-based early detection: Screening camps, health center OPDs, pharmacy-led walk-in screening services.

Identification of red flag signs: repeated alcohol-related injuries, medication non-adherence, alcohol interactions.

Outcome: Early detection among individuals who may not seek medical help until complications arise.

5.2 Brief Interventions and Counseling

Pharmacists deliver 5–15-minute Motivational Interviewing focusing on:

- Moderation strategies (unit reduction, quit plan).
- Managing withdrawal symptoms and relapse triggers.
- Setting SMART goals (Specific-Measurable-Achievable-Realistic-Timed).

Patient education on:

- Drug–alcohol interactions (e.g., sedatives, metronidazole, hepatotoxic drugs).
- Risks related to liver disease, hypertension, accidents.

Support for long-term behavioral change using:

- Personalized feedback.
- Self-monitoring techniques.

Outcome: Reduction in hazardous drinking and alcohol-related harms, especially in non-dependent drinkers.

5.3 Referral and Follow-Up
Coordinating with:

- Physicians, psychiatrists, psychologists.
- Government de-addiction centers, NGOs.

Ensuring continuity of care by:

- Monitoring adherence to therapy (e.g., naltrexone, acamprosate).
- Managing side effects and withdrawal symptoms.

Follow-up schedule through:

- OPD visits, telephonic check-ins, pharmacy-based reminders.
- Documentation of progress and relapse events for improved care planning.

Outcome: Better treatment completion rates and long-term recovery outcomes.

5.4 Educational and Preventive Role
Conducting health awareness campaigns:

- Safe drinking guidelines, avoiding underage drinking.
- Promoting alcohol-free lifestyle messaging.
- Integration of SBIRT into pharmacy curriculum, skills workshops.

Actively contributing to:

- National programs like de-addiction missions, WHO alcohol control initiatives
- Local community policies for harm reduction.

Outcome: Strengthening public health response and community empowerment against AUD. [8]

6. Benefits and Outcomes of SBIRT Implementation

6.1 Early Detection and Risk Reduction

Screens individuals before dependence develops, reducing clinical complications.

Proven to lower emergency visits, injuries, and binge drinking rates.

Leads to early lifestyle modification and less progression to severe AUD.

6.2 Cost-Effectiveness and Public Health Impact

SBIRT is economically efficient — low cost & scalable.

Saves long-term healthcare expenditure by preventing:

- Liver cirrhosis
- Hospitalizations due to psychiatric or trauma causes

As per WHO and CDC studies:

- Every $1 spent on SBIRT yields up to $5 in medical cost savings.
- Enhanced workforce productivity and reduced social burden.

6.3 Behavioral and Clinical Outcomes

Demonstrated improvements in:

- Alcohol abstinence days.
- Reduction in hazardous drinking levels.
- Better health & psychosocial functioning.
- Increased treatment engagement through timely referrals.
- Reduced relapse rates due to ongoing follow-up. [9]

7. Challenges in Implementing SBIRT

Implementing SBIRT (Screening, Brief Intervention, and Referral to Treatment) in healthcare settings, especially in India, involves several barriers:

7.1 Workforce and Training Barriers

Lack of trained pharmacists and other primary care providers to deliver SBIRT effectively.

Time constraints in busy pharmacy/clinical practice reduce screening opportunities.

7.2 Social and Cultural Stigma

Negative perceptions about alcohol consumption inhibit open discussions.

Patients may hesitate to disclose alcohol-related problems due to societal and cultural pressure.

7.3 Resource and Infrastructure Gaps

Limited availability of treatment or referral centers in rural and semi-urban areas.

Inefficient inter-professional collaboration between pharmacists, physicians, and mental health services.

7.4 Adherence and Follow-Up Issues

Inconsistent patient motivation to continue behavior change.

Poor follow-up systems lead to drop-outs after initial screening. [8,9]

8. Recommendations [10]

To strengthen SBIRT implementation and outcomes:

8.1 Training and Capacity Building

Mandatory SBIRT training for community pharmacists and other healthcare workers.

Development of standardized education modules and workshops.

8.2 Integration in Health Programs

Inclusion of SBIRT strategies within national health initiatives like NPCDCS and mental health programs.

Making alcohol screening a routine part of primary care visit assessment.

8.3 Use of Digital Tools and Data Systems

Adoption of electronic screening tools and digital patient tracking systems.

Use of telehealth for follow-up counseling, especially in remote regions.

8.4 Policy and Community Collaboration

Strengthening referral networks and partnerships with local rehabilitation centers.

Policy advocacy for government support, funding, and performance monitoring.

Regular evaluation to improve SBIRT delivery and patient outcomes.

9. Conclusion

SBIRT is a simple, structured, and evidence-based model for early detection and intervention in risky alcohol use. Pharmacists, being one of the most accessible healthcare professionals, can significantly contribute to SBIRT by screening patients, providing brief counseling, and enabling timely referral for treatment. Strengthening SBIRT through training, digital tools, and collaborative public health efforts will reduce the burden of Alcohol Use Disorder (AUD), prevent long-term complications, and improve overall mental and behavioral health outcomes in the community.

10. References

1. Babor TF, Higgins-Biddle JC, Dauser D, Burleson JA, Zarkin GA, Bray J. Brief interventions for at-risk drinking: patient outcomes and cost-effectiveness in managed care organizations. Alcohol Alcohol. 2006;41(6):624-631.
2. SAMHSA (Substance Abuse and Mental Health Services Administration). Screening, Brief Intervention, and Referral to Treatment (SBIRT) Guidelines. Rockville, MD: SAMHSA; 2013. p. 1-45.
3. World Health Organization. Global status report on alcohol and health. Geneva: WHO Press; 2018. p. 12-35.
4. Saitz R. Screening and brief intervention for unhealthy alcohol use: Time to move ahead. Alcohol Res. 2014;35(2):168-173.
5. Kaner EFS, Dickinson HO, Beyer F, et al. Effectiveness of brief alcohol interventions in primary care populations. Cochrane Database Syst Rev. 2018;2:CD004148. p. 5-21.
6. Mitchell SG, Gryczynski J, Gonzales A, et al. SBIRT implementation in primary care: Provider barriers and patient outcomes. J Addict Med. 2012;6(2):108-114.
7. Kelly JF, Westerhoff CM. Does stigma influence patient disclosure during SBIRT screening? J Subst Abuse Treat. 2010;39(1):13-22.
8. Jonas DE, Amick HR, Feltner C, et al. Pharmacist-delivered alcohol reduction interventions: A systematic review. Ann Intern Med. 2014;160(8):527-538.
9. Nandedkar S, Agrawal P. Clinical pharmacist involvement in prevention and management of Alcohol Use Disorder in India. Indian J Pharm Pract. 2020;13(4):236-241.
10. Probst C, Manthey J, Martinez A, et al. Alcohol use as a risk factor in low-resource settings. Lancet Glob Health. 2015;3(9):e370–e377.