UNIT NO. 3

ADOLESCENT ADDICTIVE BEHAVIORS – PRINCIPLES FOR INITIAL EVALUATION AND INTERVENTION

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ABSTRACT

Adolescents are more vulnerable than adults to substance experimentation and abuse and also to various forms of addictive behaviors like pathological gambling. Adolescents presenting with addictions, especially substance use disorders (SUDs), can present with acute changes of mood, cognition and behavior. Consequences include impairment in psychosocial and academic functioning and a host of other medical and social consequences. Associated characteristics to look out for are deviant and risk-taking behavior and comorbid psychiatric disorders such as conduct, disorder, ADHD, mood, anxiety and learning disorders.

Multi-disciplinary, total abstinence, 12-Step based programs are best for adolescents and services are still evolving in Singapore. Twelve Step Programs like AA (Alcoholics Anonymous), NA (Narcotics Anonymous) and GA (Gamblers' Anonymous) offer useful support in rehabilitation but may need to be adapted to the special needs of the addicted adolescents. Depending on the severity and circumstances, some adolescents may require inpatient detoxification and more intensive rehabilitation and social services. Family physicians need to be aware of adolescent addiction risk factors and protective factors to provide initial screening, counseling, education and when necessary, referral to Specialists for more specific treatment services and resources.

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INTRODUCTION

Substance Use Disorders, SUDs (DSM IV Tr) are common in adolescents all over the world who could use alcohol or substances (legal or illegal) for a variety of reasons. These include peer pressure, lax parental supervision and media portrayal of alcohol use etc. Whatever the reason, once addiction gains a foothold, it has to be identified and treated as a primary condition rather than just address the medical or social consequences alone. Take the example of smoking - about 90% of smokers start before the age of 21 and smoking rates remain high in adolescents internationally. Parental, sibling and peer smoking, as well as any experimentation are risk factors. In the US, the American Academy of Child & Adolescent Psychiatry estimates the lifetime prevalence of alcohol dependence in adolescents to be as high at 4.3% and drug use or dependence about 9.8%.

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Adolescents with addictions pose specific challenges to the Family Physician whether alcohol/substance abuse or dependence, smoking, gambling/gaming or internet/cybersex addictions. It is easy to underestimate the adolescents' problems and the Family Physician can identify such patients early for referral to the Addiction Specialist and Psychiatrist where specialist assessment and multidisciplinary, coordinated care with a comprehensive psychosocial treatment are available.

There is always a need to identify and rule out Substance Abuse or Dependence for adolescents presenting with other Psychiatric Conditions – Conduct Disorder, ADHD, Anxiety Disorder, Psychosis (eg visual hallucinations are often drug-induced). This will help improve treatment outcomes.

Some risk factors for tobacco, alcohol, and other drugs in adolescents – including individual, family, peer and community risk factors:

1. Poor academic achievement and interest or early school failure;
2. Early initiation and drug availability;
3. Lack of close attachment with parents, permissive parenting and poor parental supervision;
4. Parental and family drug abuse;
5. Parental divorce or high level of family conflicts;
6. Conduct Disorder, early antisocial, delinquent or aggressive behavior;
7. Peers and friends who drink, smoke or use other drugs;
8. Media portrayal of substance use or advertisements.

Some protective factors for tobacco, alcohol and other drugs in adolescents include: Late initiation, perceived risks of substance abuse, positive sense of self and social competence, resilience, authoritative parenting and monitoring, clear communication and supportive relationship with parents, peer disapproval of substance use, good academic achievements and aspirations, comprehensive anti-drug education, parents in recovery.

INITIAL EVALUATION

Priority should be given to alcohol and substance abuse/ dependence when present and it is important to evaluate the following systematically:

1. Adolescent Substance Abuse/Dependence - Goals of evaluation are to determine:
   a. One or more substances used or the specific addictive behavior;
   b. Effects on domains of psychosocial functioning;
   c. Diagnosis – e.g. DSM IV – Tr.

2. Its role in the Family System
3. Relationship with any Psychiatric Comorbidity

Evaluation is needed repeatedly and continuously as the full picture may not emerge over one initial interview alone.

INTERVIEWING THE PARENTS OR GUARDIANS

Areas to cover include:

1. Developmental history
2. Medical history, social and educational history
3. Substance use history/addiction history
4. Family history (psychiatric disorders/substance use)
5. Physical, emotional and sexual abuse.

Ask for significant changes in:

- **School Performance** such as decline in grades, decreased motivation to complete assignments or involvement in school activities; skipping classes/ truancy.
- **Personal Habits** such as sleep (sleeping much more or less), level of activity, appetite (increased or decreased), or hygiene.
- **Behaviour and/or Mood Changes** such as increased irritability, aggression, decreased motivation, disregard for rules, mood swings, depression; expressing suicidal thoughts or behaviors.
- **Healthy Social Activities** – involvement decline, e.g. team sports or school related activities; loss of interest in a favorite hobby, etc.

INTERVIEWING THE ADOLESCENT

During assessment and treatment, appropriate confidentiality should be observed. Since lying or minimising their substance use (or other addictions) is common in adolescents, a high index of suspicion by the family physician is important. Adolescents are more likely to give truthful information if they believe their detailed information will not be shared. Adolescents need to understand the limits of confidentiality too. Prior to interview, the family physician must review exactly what information the clinician is obliged to share and with whom. Confidentiality should be assured except when there is threat of harm to self or others. The clinician should encourage and support the adolescent's revealing the extent of substance abuse and problems to the parents.

Brief Assessment – should be multidimensional and address problems in several life domains.

1. Psychiatric comorbidity
2. School or employment performance
3. Family functioning
4. Peer & Social Relationships
5. Recreational Activities
6. Legal problems

SOME BRIEF SCREENING TOOLS

Brief Screening – AOD (alcohol and other drugs) for Adolescents – CRAFFT* Questions (Knight et al 2002), a 6-item brief screening test for Adolescent Substance Abuse – can be easily administered in the clinic interview:

C – Have you ever ridden in a CAR driven by someone (including yourself) who was "high" or had been using alcohol or drugs?

R – Do you ever use alcohol or drugs to RELAX, feel better about yourself, or fit in?

A – Do you ever use alcohol/drugs while you are by yourself, ALONE?

F – Do your family or FRIENDS ever tell you that you should cut down on your drinking or drug use?

F – Do you ever FORGET things you did while using alcohol or drugs?

T – Have you gotten into TROUBLE while you were using alcohol or drugs?

**** 2 or more yes answers suggests a significant problem & require futher extensive assessment***

The Lie-Bet Questionnaire is a two-question screen for problem gambling:

- Have you ever lied to anyone important about how often you gamble?
- Have you ever had to increase your bet to get the same excitement from gambling?

Yes to either Question – Explore at-risk or problem gambling.

The Gamblers Anonymous questionnaire comprises 20 questions that identify negative social, physical, and emotional consequences of gambling behaviors, seven or more positive responses indicate probable pathological gambling. This screen has shown reliability in adolescents.

Use one or more of these quick screens with every adolescent presenting for treatment – especially in substance abuse treatment settings. When results are positive, probe for gambling behaviors and consequences. Rely on DSM-IV-TR criteria and clinical presentation to differentiate social gambling from pathological gambling.

Other Instruments – e.g. SOGS-RA (The South Oaks Gambling Screen – Revised for Adolescents) based on DSM III Criteria and **MAGs (Massachusetts Gambling Screen)** based on DSM IV criteria can also be used, especially in more specialised settings.

GAMBLERS ANONYMOUS' 20 QUESTIONS (GA 20)

Most compulsive gamblers will answer "yes" to at least 7 of these questions:

1. Did you ever lose time from work or school due to gambling?
2. Has gambling ever made your home life unhappy?
3. Did gambling affect your reputation?
4. Have you ever felt remorse after gambling?
5. Did you ever gamble to get money with which to pay debts or otherwise solve financial difficulties?
6. Did gambling cause a decrease in your ambition or efficiency?
7. After losing did you feel you must return as soon as possible and win back your losses?
8. After a win did you have a strong urge to return and win more?
9. Did you often gamble until your last dollar was gone?
10. Did you ever borrow to finance your gambling?
11. Have you ever sold anything to finance gambling?
12. Were you reluctant to use "gambling money" for normal expenditures?
13. Did gambling make you careless of the welfare of yourself or your family?
14. Did you ever gamble longer than you had planned?
15. Have you ever gambled to escape worry or trouble?
16. Have you ever committed, or considered committing, an illegal act to finance?
17. Did gambling cause you to have difficulty in sleeping?
18. Do arguments, disappointments, or frustrations create an urge to gamble?
19. Did you ever have an urge to celebrate any good fortune by a few hours of gambling?
20. Have you ever considered self-destruction or suicide as a result of your gambling?

MORE DETAILED ASSESSMENT

Domains for more detailed assessment – corroborate with parents and guardians. If initial screening raises concerns about substance use or another addiction, a more detailed assessment may be carried out. Listed below are the domains that should be assessed in order to arrive at an accurate picture of the adolescent's problems.

- History of use of Substances/Other Addictions – include over-the-counter and prescription drugs, tobacco, and inhalants/other addictions. Age of first use; frequency, length, and pattern of use; mode of ingestion/abuse; treatment history; and consequences including loss of control, preoccupation, and social and legal consequences.
- Strengths and Resources – self-esteem, family, other community supports, coping skills, and motivation for treatment.
- Sexual history – include sexual orientation, sexual activity, sexual abuse, sexually transmitted diseases (STDs), and STD/HIV risk behavior status (e.g., past or present use of injecting drugs, sharing needles, past or present practice of unsafe sex, selling sex for drugs or food).
- Developmental issues – look out for possible ADHD, learning problems, and influences of traumatic events (e.g. physical or sexual abuse).
- Mental health history – focus on depression, suicidal ideation or attempts, ADHD, anxiety disorders, and behavioral disorders, as well as details about prior evaluation and treatment for mental health problems.
- Family history – include history of substance use in parents, guardians or the extended family; medical and psychiatric problems and treatment, chronic illnesses, illegal activities or incarceration, child management concerns, and the family's ethnic, socioeconomic and home background (e.g. financial, poverty issues, child welfare issues etc). The family's strengths should also be noted as they will be important in intervention efforts.
- School history – include academic and behavioral performance, and attendance problems.
- Vocational history - include paid and volunteer work.
- Peer relationships, interpersonal skills, gang involvement, and neighborhood environment.
- Police or legal problems, delinquency – include types and incidence of behavior and attitudes toward that behavior.
- Social service or child welfare agency involvement (e.g. number and duration of foster home placements), and residential treatment.
- Leisure-time activities – include recreational activities, hobbies, and interests.
- Medical history – previous illnesses, ulcers or other gastrointestinal symptoms, chronic fatigue, chronic cough, recurring fever or weight loss, nutritional status, recurrent nosebleeds, infectious diseases, medical trauma, and pregnancies.
- Physical Examination – Besides vital signs and signs of intoxication or withdrawal, focus on the gastrointestinal, cardiovascular, neurological systems and skin – look for injection tract marks on the limbs, inguinal and neck regions, sores; nasal congestion and mucous membrane damage.

LAB INVESTIGATIONS

1. **Drug urine screening** – only to confirm drug use. It is important to get the consent from the adolescent and parents/guardian. If available, proper collection techniques and handling procedures are crucial with confidentiality, documentation and careful interpretation. A single negative screen does not rule out drug abuse. Likewise, a single positive screen does not diagnose severity of the drug use. Due to the limited time a drug will remain in the urine and possible adulteration, a single negative test does not exclude drug use.

URINE TOXICOLOGY

Substance	Half-life (hr)	Detection after Last Use (days)
Amphetamines	10-15	1-2
Barbiturates	20-96	3-14
Benzodiazepines	20-90	2-9
Cocaine	0.8-6.0	0.2-4
Methaqualone	20-60	7-14
Opiates	2-4	1-2
Phencyclidine (PCP)	7-16	2-8
Cannabinoids (THC)	10-40	2-8 (acute) 14-42 (chronic)

Drugs not usually tested: LSD, psilocybin, MDMA, MDA, other designer drugs

Adapted from American Acad of Child and Adol Psychiatry 2004

2. **Blood investigations,** e.g. Liver Function Tests, GGT, FBC with platelets, MCV (for alcohol dependence). Blood for toluence in inhalant abuse.

3. **Interpretation is important and referral to a specialist** should be considered earlier especially if there are multiple consequences and medico-legal implications.

TREATMENT OPTIONS AND RECOMMENDATIONS

Whilst primary prevention are best targeted at the school level and the community, in Singapore, our levels of care for adolescent addiction treatment are still evolving and can be summarised as follows:

1. Brief intervention and education – Primary Health Care/Family Physicians
2. Specialist Addiction Outpatient Evaluation, Treatment and Rehabilitation
3. 3 Acute Residential Treatment (inpatient detoxification and rehabilitation)
4. Intermediate levels of care such as intensive outpatient rehabilitation are still being developed
5. Specialist Addiction Outpatient follow-up
6. Self-help groups (AA, NA etc) & other 12-Step Programs
7. Longer term Residential Aftercare (e.g. Half Way Houses).

Principles of brief intervention and counseling for adolescent substance use disorders and other addictions:

- Develop a discrepancy (between goals and current behaviors)
- Avoid arguments
- Roll with resistance
- Empathy as a counseling style (be interested, curious, "real", listen and reflect on strengths and competencies, let them know you are concerned about their substance use without being "naggy "or judgmental)
- Self-Efficacy (optimism, e.g., "You can do it")

Motivational interviewing or enhancement techniques are useful to engage and motivate adolescents in evaluation and treatment as they are more open to non-judgmental strategies and open-ended questions.

Indications for referral to Addiction Specialist include:

1. Strong Suspicion of Drug Abuse or Addictive Behaviors
2. Poor compliance and support by patient or family
3. Time spent out of proportion to presenting complaints
4. Multiple complications from addictions including medical and legal consequences
5. Comorbid SUD/Addiction and Other Psychiatric Conditions.

Consider referral for hospitalisation if:

1. At risk of severe or complicated withdrawal – refer to general hospital
2. Complicated medical conditions or complications
3. Difficulties or repeated failure with outpatient treatment.

Consider urgent referral to a Psychiatrist if:

1. Safety concerns, e.g. self harm, suicidal or homicidal
2. Possibility of another psychiatric diagnosis (Psychiatric Comorbidity)
3. Difficulty in assessments requiring a more thorough biological, psychological and social assessment.

Continuity of care is crucial and all stakeholders (parents, schools, doctors, counselors and social workers) must work together to help the adolescent and the family.

Principles of Treatment Planning

1. Early evaluation, identification & referral for Substance abuse or Addiction Specialist Services
2. Establish trust and therapeutic rapport –minimise treatment dropout and maximise motivation
3. Discuss your concerns and the health consequences with the adolescent and parents or guardians. Educate & point out the benefits of professional assessment and treatment
4. Involve the family in assessment, treatment planning and throughout the whole continuum of care. Work closely with schools and other social agencies already involved with the adolescent and parents
5. Monitor and prepare for future relapses – relapse prevention strategies
6. Restructure leisure time
7. Positive peer support (i.e. non-using and non-addicted peers), parental supervision and guidance.

TWO ILLUSTRATIVE CASE EXAMPLES

Case 1 – Inhalant Abuse

M is a 14-year-old girl from a neighbourhood Secondary School-referred by her principal for glue sniffing when caught with 2 other girls from her school. Her parents have marital and financial problems and little time for her. They were called up by the principal several times to warn them of recent truancy and declining grades but finally confronted with the evidence of glue sniffing – empty tubes of glue and money stolen from her sister. The principal suggested they pay a closer attention to parental supervision and parenting skills if they want their daughter to remain in the same school.

Components of her management include:

1. Assess patient, parents and family. Referral to Addiction Specialist.
2. Exclude conduct disorder – treat any comorbid conditions when present.
3. Look for family history of substance use, past or current child abuse.
4. Blood and Urine Testing.
5. Psychoeducation and Counseling – include family sessions to address family dysfunction.
6. Coordination with School Counselor/Principal – monitor school progress and peer group influence. Written contract signed by patient and her parents for attendance and compliance with treatment.
7. Counseling for parents – focus on their role in parenting and supervision. Referral to Medical Social Worker for financial assistance and marital counseling.

Patient M is receiving counseling from the Substance Abuse Counselor and also her Pastoral Care Counselor in School. Her parents have met with the Medical Social Worker and are getting marital counseling, and making changes to their parenting roles and supervision. Her parents are also liaising closely with the School Principal and Counselor. Her grades are improving and her parents are learning to make improvements in their relationships while giving her more time and attention, including setting limits for her.

Case 2 – Soccer Betting

J is a 17-year-old Polytechnic student who recently lost thousands of dollars through soccer betting and repeatedly chasing losses was referred by his GP. His parents have paid up for him on four occasions this year alone and he is now in debts again. He felt highly stressed due to pressure form his bookies, annoyance by his girlfriend (who also lent him some money for the last 2 years for his gambling debts) and difficulty concentrating on his exam preparations. He was discovered when he tried to sell some of his mother's jewelry as a desperate measure. His parents brought him for professional help as he is sitting for him examinations.

Unlike recreational (social) gambling, Pathological Gambling Disorder is an impulse control disorder characterised by recurrent and maladaptive gambling behaviors which significantly impair the patient's functioning with psychosocial consequences (DSM IV Tr). Pathological gambling is frequently comorbid with substance abuse or dependence, ADHD, and affective disorders. Adolescents gamble to win money and for excitement and entertainment, social acceptance, as a coping mechanism, or to feel a "rush." Gambling is particularly attractive to adolescents who enjoy competing with peers. Being in a group that gambles offers a sense of community and shared experience. Adolescents are more vulnerable than adults to gambling and gambling-related problems. In the Western world, prevalence estimates of disordered gambling among youth reveal rates that are two to four times that of the general adult population.

Risk factors for adolescent gambling disorders include male gender, alcohol and drug use, deviant peers, family history of gambling, and impulsive behavior. While several risk factors characterise disordered gambling among adolescents, the extent to which these characteristics are related remains to be determined.

Components of management include:

1. Assess patient and parents. Referral to Addiction Specialist.
2. Exclude bipolar disorder (manic phase), depression, alcohol and other substance use disorders and anti-social personality traits & treat comorbid conditions when present.
3. Psychoeducation and addiction counseling – include budgeting and financial accountability, GA and recovery support groups.
4. Family Sessions and Counseling with parents – help structure a debt payment plan to relieve pressure, Gam-anon. Address minimising, enabling, bail-outs and cover-ups (co-dependent behaviors) in parents and significant-others.
5. Cognitive Behavior Interventions.
6. GA & 12-Step Programs.
7. Medications – for comorbid conditions and also reduction of urges and impulses (e.g. SSRIs, Naltrexone and Mood stabilisers) in the Specialist setting.
8. Monitor compliance, progress and close follow-up.

Patient J is receiving counseling, psycho-education and learning about the principles of GA (Gamblers Anonymous). His parents are learning about Gam-anon (for family members) and getting involved in family support groups. His parents are monitoring his allowance, installment payments and helping to enforce financial accountability while re-establishing trust with him in the family.

CONCLUSIONS

Adolescence is the period of experimentation and also vulnerability to various peer and media influence. Peer influence, in particular has a profound effect on attitudes, choices and behavior of adolescents. Besides alcohol and SUDs with carry associated high risk behaviors, various behavior addictions are also raising concerns. Accessibility to gambling and gaming for example are increasing making rapid inroads with the internet being an integral part of adolescent lifestyle and adolescents today being technologically more savvy. Earlier evaluation and specific treatment should therefore be more accessible for addicted adolescents although prevention is still the best.

The main tool of assessment is the clinical interview with the adolescent and parents. Multiple sources of information and corroborative history from the parents, close family members, and school counselors or teachers/ principal (if available) are crucial to build an accurate picture for diagnosis and management planning. The clinician should inquire, with both the adolescent and parents about individual, family, peer and community risk factors . This can be done to enhance the index of suspicion for likely cases of addictions and also during routine screening, especially for behaviour addictions (e.g. problem gambling) which can be a "hidden" problem initially.

Alcohol or Substance abuse and dependence basically defer in the degree of loss of control and consequences (DSM IV-Tr). Other behavior addictions eg. Pathological Gambling are classified under Impulse-Control Disorders (DSM-IV Tr). Basic management principles are similar although they may have no overt physiological intoxication or withdrawal features and additional measures are specific to individual addictions. Disease orientation – utilising the disease concept takes away shame and blame which are stigmatising and can hinder earlier efforts to seek and receive treatment.

Family involvement is crucial – it is best to treat within the context of the family system. Actively involve parents and the school counselors or pastoral care teachers who may look out for peer influence and have a preventive role (relapse prevention in addition to primary prevention strategies in schools). Residential treatment (e.g. half-way house) would have to be considered earlier if the family is too dysfunctional and chaotic, parents also abusing drugs, abusive or a combination of these. Clinicians should not take over responsibility for the adolescent or the parents (however enabling or co-dependent) who should be actively involved in the decision making processes. If parents are abusing alcohol or drugs or have another addictive disorder, they would require referral to the specialist for their own treatment.

In treatment – multi-disciplinary, total abstinence programs are recommended for the adolescent as addiction is a chronic, relapsing disease with multiple physical, psychological and social consequences. Secondary prevention (especially relapse prevention) are important in follow up. Adolescents must be taught how to handle relapses and get help immediately as relapses are part of the process of recovery. The mainstay of addiction treatment is psychosocial treatment with medications playing an adjunctive role except when comorbid disorders are present.

Inpatient treatment factors predictive of outcome are: time in treatment, family involvement, use of problem solving , and provision of comprehensive services (housing, academic assistance and recreation). Post treatment variables that favour better outcomes include association with non-using peers, and involvement in leisure time activities, work and school. Variables most predictive of successful outcomes include treatment completion, low pretreatment use, peer and parent social support and non-use of substances.

The course of Substance Use Disorders is variable. Adolescents with abuse often decrease or discontinue use in late adolescence or early adulthood, while those with dependence and more risk factors are more likely to continue to meet criteria for one or more Substance Use Disorders. Family physicians need to be familiar with risk factors and comorbidity of alcohol/substance abuse and behavior addictions as they have an important role to play in the early identification, evaluation and intervention of adolescents and their families at the primary care level.

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LEARNING POINTS

- **Adolescents face greater risks of having addictions than adults. Risk taking and sensation seeking are increased during adolescence. Addictions can impair their normal development and cause harm and death to themselves or others (reckless behavior, accidents, suicide and homicide).**
- **Warning signs of adolescent alcohol and drug abuse include a drop in school performance, irritability or apathy, mood changes (e.g. depression), poor self-care, weight loss, over-sensitivity to questions about drinking or drugs, and sudden changes in friends, sudden need for more money or involvement in stealing. Waiting till adolescents meet full criteria for diagnosis of substance dependence and other addictions would delay the benefits of earlier intervention and referral.. This is because the presentation of tolerance, withdrawal and medical problems may be be different from adults despite the general utility of DSM IV constructs of dependence.**
- **Comorbidity – Adolescents with substance use disorders may also have one or more co-occurring psychiatric disorders, most often Conduct Disorder and/or Major Depression, although ADHD, anxiety disorders (including social phobia and PTSD), bipolar disorder, eating disorders, learning disabilities, and other Axis II disorders (eg personality disorders) need to excluded too. Likewise, for the behavior addictions like Pathological Gambling, comorbidity is also common. All comorbid conditions need to be identified and treated appropriately together with the primary Substance Use Disorder and Addiction.**
- **Inpatient treatment is recommended for adolescents whose alcohol/drug problem has interfered significantly with functioning in school, work and home environments, and those who could not maintain abstinence through outpatient treatment. Comorbid psychiatric disorders (e.g. major depression, self-harm, suicidality, etc), substance dependence and drug overdoses all indicate the need for specialist evaluation for inpatient treatment.**
- **In recovery, it is important to focus on safety concerns and issues but also, the strengths and resilience of adolescents and their families. Parental guidance and role-modeling and peer influence are important not only in prevention but also in recovery.**
- **Counselling and behavior interventions effective in adults may be used in adolescents but the content and structure should be modified to be developmentally appropriate. The 12 Step model may need to be adapted when used with adolescents who require extra clarification of concepts, more time to accept they have a problem and be willing participants in the treatment process. Family counseling and therapy with social support services are necessary for comprehensive treatment.**
- **Family physicians need to be familiar with the risk factors and protective factors of substance use and other addictions, normal adolescent development and different substances of abuse to adequately prepare for earlier identification and referral to specialist services and resources.**