

Indian Academy of Pediatrics Consensus Guidelines on Prevention and Management of Suicidal Behavior in Adolescents

PREETI M GALAGALI,¹ CHITRA DINAKAR,² POONGODI BALA,³ DHEERAJ SHAH,⁴ PIYUSH GUPTA,⁴ CHANDRIKA RAO,⁵ LATHA RAVICHANDRAN,⁶ AMITHA RAO AROOR,⁷ DIGANT SHASTRI,⁸ R RAMESH KUMAR,⁹ PAUL RUSSELL,¹⁰ MKC NAIR¹¹

From ¹Bengaluru Adolescent Care and Counselling Center, Bengaluru, Karnataka; ²Department of Pediatrics, St John's Medical College Hospital and St John's National Academy of Health Sciences, Bengaluru, Karnataka; ³Department of Psychiatry, Kaizen Mind Care, Chennai, Tamil Nadu; ⁴Department of Pediatrics, University College of Medical Sciences and GTB Hospital, New Delhi; ⁵Department of Pediatrics, MS Ramaiah Medical College and Hospital, Bengaluru, Karnataka; ⁶Department of Pediatrics, Sri Ramachandra Medical College and Research Institute, Chennai, Tamil Nadu; ⁷Department of Pediatrics, AJ Institute of Medical Sciences, Mangalore, Karnataka; ⁸President and ⁹Honorary Secretary-General, Indian Academy of Pediatrics, 2019; ¹⁰Department of Psychiatry, Child and Adolescent Psychiatry Unit, Christian Medical College, Vellore, Tamil Nadu; ¹¹NIMS-SPECTRUM-Child Development Research Center, NIMS Medicity, Thiruvananthapuram, Kerala.

Correspondence to: Dr Preeti M Galagali, Director, Bengaluru Adolescent Care and Counselling Centre, 528 2nd Block Rajajinagar, Bengaluru, Karnataka 560010. drpgalagali@gmail.com

Justification: Suicide is an important cause of adolescent mortality and morbidity in India. As pediatricians are often the first point of contact for adolescents and their families in the healthcare system, they need guidelines to screen, assess, manage and prevent adolescent suicidal behavior to ensure survival, health and mental well-being of this vulnerable population. **Objectives:** To formulate guidelines to aid pediatricians for prevention and management of adolescent suicidal behavior. **Process:** Indian Academy of Pediatrics, in association with Adolescent Health Academy, formed a multidisciplinary committee of subject experts in June, 2019 to formulate guidelines for adolescent suicide prevention and management. After a review of current scientific literature and preparation of draft guidelines, a national consultative meeting was organized on 16 August, 2019 for detailed discussions and deliberations. This was followed by refining of draft guidelines, and discussions over e-mail where suggestions were incorporated and the final document was approved. **Guidelines:** Pediatricians should screen for mental distress, mental disorders and suicidal and para-suicidal (non-suicidal self-injury) behavior during adolescent health visits. Those with suicidal behavior should be referred to a psychiatrist after providing emergency healthcare, risk assessment, immediate counselling and formulation of a safety plan. Pediatricians should partner with the community and policymakers for primary and secondary prevention of adolescent suicide.

Keywords: Care cascade, Counseling, Emergency management, Risk assessment, Safety plan.

Published online: April 26, 2022; **PII:** S097475591600420

Adolescents form 18% of India's population, and suicide is the third leading cause of adolescent mortality [1]. Only 1% of the pediatric population with mental disorders seeks treatment, due to the scarcity of mental health services and the social stigma [2]. Currently, there is an approximate 75% shortage of mental health professionals in the country [3]. Hence there is a need to stepped care approach to pediatric mental healthcare with active involvement of non-specialists. As pediatricians share a long standing rapport with families, parents often seek their advice for management of adolescent mental health issues. Majority of the adolescent suicides are impulsive and timely intervention can save young lives. Hence there is a need to formulate practical guidelines for pediatricians for management and prevention of adolescent suicidal behavior.

Existing Adolescent Mental Health Status

The National Mental Health survey (2015-2016), reported

a 7.3% prevalence of mental disorder in adolescents, higher in urban metro regions with similar distribution between males and females. The most common disorders were anxiety and depression [4]. Half of the mental illnesses begin by the age of 14 years [5]. In 2021, UNICEF reported a two times increase in prevalence of adolescent mental disorders due to pandemic related stressors [6].

The risk of suicides among adolescents in India is 1.3% [7]. Among high school students, the prevalence of suicide ideation is 6.0-21.7% and of suicide attempts is 0.39-8%. [8]. In adolescents with mental disorders, the estimated risk of suicide is 47-74% [9]. In 2020, one adolescent committed suicide approximately every hour with more girls than boys [10] The actual figures may be higher as in most cases there is inaccurate reporting [10,11]. Hanging, poisoning, drowning and self-immolation were the main modes of committing suicide. Family problems (35%), break-up in romantic relationships (12%), physical and mental illness (12%)

and failure in examinations (10%) were the main causes of suicide in adolescents [10].

Suicide risk identification is a window of opportunity for a pediatrician to contribute to suicide prevention. It is estimated that of all youth presenting with a suicide attempt, 25% have a reattempt and 5-10% commit suicide subsequently. A substantial proportion of youth have had medical visits in the year preceding completed suicide [12]. Adolescents with suicidal ideation might not reveal about their thoughts unless asked. Extreme hopelessness and absence of belongingness with easy access to means may trigger a suicidal attempt [13]. Asking about suicide does not increase the risk for the same. There is evidence to suggest that brief behavioral health interventions with follow-up care have a positive impact on outcomes [14,15]. There is currently inadequate evidence for efficacy of specific suicide prevention interventions [16-18]. A combination of strategies is known to work the best in prevention (**Web Table I**). WHO has recently released guidelines for framing country-specific suicide prevention programs and strategies for promoting positive mental health in adolescents [19,20].

In 2019-2020, guidance for medical officers to manage suicidal behavior and mental disorders in children and adolescents and a manual for caretakers of shelter homes to manage non-suicidal self-injury (NSSI) in female adolescents in Indian settings were published by National Institute of Mental Health and Neurosciences (NIMHANS) [21,22]. Recently, suicide has been decriminalized under the National Mental Health Care Act 2017. The Government of India is currently considering framing a national comprehensive suicide prevention strategy [23].

OBJECTIVES

To empower pediatricians with guidelines to screen and manage adolescent suicidal behavior in clinical practice, and to outline practical strategies for preventing suicides.

PROCESS

The process of forming these guidelines started on 1 June, 2019 with the formation of a national committee of multidisciplinary subject experts in collaboration with Adolescent Health Academy. The experts were selected on the basis of their professional competence and commitment. They are well known in their respective fields with a specialty post graduate and/or doctorate degree with over two decades of professional and research experience. Five sub groups of experts including adolescent health specialists, psychiatrists and pediatricians were formed to evaluate scientific evidence regarding existing status of adolescent mental health, risk and protective factors for suicide, clinical assessment, prevention and emergency

management. Each sub-committee reviewed the existing published literature using the following indexing bodies/databases, but not limited to, Medline, Pubmed Central, Citation index, Sciences Citation index, Expanded Embase, Scopus, Directory of Open access journals (DoAJ). The types of articles that were reviewed included meta-analysis, systematic reviews, original papers, case series, case reports, guidelines from WHO and paediatric professional bodies, international and national statistics in the public domain. Some search words and terms included were: suicide, adolescents, guidelines on suicide prevention and management, non suicidal self-injury, self-harm, suicides in India, suicidal attempt, counselling, etc. After multiple rounds of discussions, the sub-committees prepared draft guidelines pertaining to their respective topics. The draft guidelines were presented and discussed in depth at the National Consultative Meet conducted at Bangalore on 16 August, 2019. During the pandemic, due to the inability of organizing physical meetings, further discussions were continued via digital media. The final document was prepared after consensus through a series of online and email discussions and partial Delphi method. Updates based on revised literature review (up to January, 2022) and suggestions of the team members were incorporated in the guidelines document.

GUIDELINES

Pediatricians should assess all adolescents presenting to a healthcare facility for suicidal behavior and perform a brief risk assessment. If suicidal behavior or risk is detected, pediatrician should refer to a child psychiatrist/psychiatrist after providing emergency care and counselling. Pediatricians should advocate for adolescent suicide prevention measures.

Risk and Protective Factors

All adolescents should be screened for risk and protective factors (**Table I**). Existence of multiple risk factors increases the risk of suicidal behavior and protective factors decrease the risk [24-28]. Suicide occurs due to a dynamic interaction between numerous biopsychosocial factors. Ninety percent of suicidal attempts among adolescents are impulsive [8]. Adolescents have a high emotional reactivity due to differential maturation of the parts of the brain in this phase of life which makes them prone to impulsive behavior, especially in emotionally charged situations and conditions of extreme distress [25]. A major life stressor like a break up of an intimate relationship, academic failure, adverse influences of digital and social media and availability of lethal means of committing suicide can trigger suicide [25]. Adolescents with academic difficulties and learning problems have a 3-times higher risk of suicide compared to those who do not have these issues [26].

Table I Risk and Protective Factors for Adolescent Suicide

<i>Risk factors</i>	<i>Protective factors</i>
<i>Individual</i>	
Female sex	Positive coping skills
School drop out	Emotional self- regulation skills
Previous history of suicidal attempt	High self esteem
Death wish/ suicidal notes/ online posts	Conflict resolution skills
Non suicidal self- injury	Involvement in hobbies and activities
Child abuse/ trafficking	Employment
Bullying, cyberbullying	Religious belief
Marginalized youth	Good social skills
Mental and physical illness	Help seeking behavior
Failed intimate relationship	
Substance use disorder	
Children in conflict with law and in need of care and protection	
Gender minority youth: LGBTQIA	
<i>School and Peers</i>	
Failure in exam	Academic achievement
Learning problems	Positive peer relationships
Violent peers	Strong school connectedness
Lack of school counselling services and social support	Life skill education, suicide and bullying prevention programs
<i>Family</i>	
Family dysfunction and violence	Family stability
Child abuse and neglect	Authoritative parenting
Economic crisis, environmental disasters	Strong family connectedness
Family h/o suicide, mental disorder, alcohol use disorder	Positive discipline
<i>Community</i>	
Access to means of suicide	Access to adolescent friendly and mental health services
Unsafe media portrayal of suicide	Responsible media reporting
	Comprehensive national policy for suicide prevention

Prepared with material from references 23-28. LGBTQIA - Lesbian, gay, bisexual, queer, transgender, intersex, asexual.

Adolescents living in difficult circumstances e.g., in childcare institutions, street children, exposed to adverse childhood experiences, sexually abused, in poverty, areas of armed conflict, natural disasters, with severe substance use disorder and emotional dysregulation are prone to parasuicidal behavior or non-suicidal self-injury (NSSI) [21]. NSSI behavior is defined as deliberate destruction or alteration of body tissue without suicidal intent. Self-cutting is the most common NSSI [21]. Research indicates that adolescents indulge in NSSI to alleviate feelings of anger, sadness, to distract themselves from problems, to secure attention and as a form of self-punishment. NSSI is a risk factor for suicide [22].

Factors which protect against suicidality are family support, peer and school connectedness, physical and mental well-being, life skills (e.g., problem solving and coping skills) and availability of adolescent healthcare resources. [13].

Risk Assessment

All adolescents should be screened for suicidal behavior

including suicidal ideation, thoughts, attempts and NSSI during clinical encounters and annual health visits using the HEEADSSS psychosocial interviewing framework, in privacy and after explaining the limits of confidentiality [29,30]. Questions should be short, non-judgmental and in developmentally appropriate language. Collateral information should be obtained from parents, peers, school teachers and counselors. Disclosure of suicidality entails sharing this information with a trustworthy caregiver that the adolescent chooses, to discuss further management plan to ensure his/her safety. Pediatricians should maintain medical records regarding documentation of assessment of suicidal behavior and management plan.

Those with suicidal ideation and NSSI should be asked about intent and plan (**Table II**). Adolescents with suicidal thoughts can be classified into three risk groups [31]:

- *Low risk*-thoughts of death only; no plan or behavior.
- *Moderate risk* -suicidal ideation, with limited suicidal intent and no clear plan.
- *High risk*- suicide plan with preparatory behavior

When adolescents do not reveal suicidal behavior, there is a possibility of detecting suicidal risk using ‘IS PATH WARM’ mnemonic developed by the American Association of Suicidology, which can be used to identify warning signs of suicide [32,33] (**Box I**). Those with suicidal thoughts and plan of self-harm in the past one month or with a past history of self-harm in the past one year, currently presenting with extreme agitation, violent episodes, distress and lack of communication are also considered as high risk, even though they may not express suicidal thoughts, intent or plan [34].

All adolescents with suicidal thoughts should undergo detailed history taking and examination to rule out medical, neurodevelopmental and mental disorders. Assessment of emotional and behavioral issues should be conducted. Risk and protective factors for suicide should be assessed.

Additional screening tools: Screening tools may complement but not replace thorough clinical assessment and can be self-administered. Ask Suicide Screening Questionnaire (ASQ) is a 4-item measure that has good sensitivity in identifying youth at risk for suicide [33]. Other screening tools include Columbia Suicide Severity Rating Scale, Beck Depression Inventory and Patient Health Questionnaire- 9 (**Web Table II**).

Criteria for Referral

All suicidal ideation and attempts and NSSI should be taken seriously, and require referral to a mental health specialist. Emergency mental health referral is needed if there is immediate threat to life, and for patients assessed as moderate to high risk and with severe mental distress. Urgent mental health referral within 48 to 72 hours is needed for patients with low risk.

Emergency Management of Adolescent Suicidal Behavior

The potential emergency situations encountered in clinical settings are:

Box I Warning Signs of Suicide (IS PATH WARM)

- I Ideation (Talking or writing or posting online about death, threatening to hurt or kill self, giving away prized possessions)
- S Substance use
- P Purposelessness (Having no reason to live)
- A Anxiety
- T Trapped
- H Hopelessness
- W Withdrawal
- A Anger(uncontrolled)
- R Recklessness
- M Mood changes

Prepared with material from references 31,32.

Presentation with life threatening health effects: As in poisoning, near drowning and hypoxic ischemic encephalopathy following hanging. This situation needs to be handled with triaging, resuscitation, stabilizing and appropriate referral following brief interventional counselling focusing on the physical health needs of the adolescent and assurance of support to the family. The pediatrician interventions should continue through the recovery period to complete the protocol suggestions.

After an event: Parents and adolescent seeking intervention following an attempted suicide or self-harm attempt.

Adolescents categorized as high risk for suicide: Adolescents with warning signs of suicide, past history of suicide attempt, severe mental disorders, substance use disorder, multiple risk factors and refusal to follow the safety plan are considered to be high risk even if they present with only suicide ideation without a plan

A protocol is suggested to provide a minimum care systematic strategy with the intention of effective suicide prevention at first contact and an outline of follow up care. (**Fig.1** and **Box II**). After medical clearance, the cascade of care suggests therapeutic assessment and interventions

Table II Screening Questions for Suicidal Behavior

<i>Ideation (frequency, intensity)</i>	<i>Intent</i>	<i>Plan</i>
There are times when situations are unbearable and hopeless, young people think of hurting or killing themselves to end it all. Have you ever thought of hurting /killing yourself? How often do these thoughts happen? How long do they last? What do you do when you have them? What coping strategies do you use? What are the triggering events for these thoughts?	Have you ever thought of acting on your thoughts? How likely do you think that you will act on your thoughts?	Do you have a plan? If so, how would you intend to do it and where? Which means would you use? Do you have a time line in mind?

Prepared with material available in references 30-33.

covering counseling of the adolescent with focus on inculcating 'hope', safety plan, protective support, lethal means counseling and handling substance use [35,36]. This is followed by a plan for inpatient or outpatient care. National 24×7 toll-free mental health helpline numbers should be shared with the patient and the parents. Subsequent interventions include motivational counseling, addressing treatment barriers, using caring contacts and multidisciplinary collaborative care with psychiatrists, psychologists, psychiatric social worker, educators and counsellors [12].

Pediatricians should consider any suicide risk as an emergency akin to a coronary ischemic event. They should ensure the following steps, ensuring complete medical documentation [36]:

- i) Stabilize physical health, ensure emergency wound care and completion of age appropriate tetanus immunization schedule and rule out medical problems with acute psychiatric symptoms with altered sensorium like brain tumors, seizures, hypothyroidism, hyperthyroidism, hyperammonia, Wilson disease, hypocalcaemia, drug overdose and substance abuse [37].
- ii) Evaluate mental health status and assess the degree of mental distress, the extent of functioning in the form of ability for self-care, sleep, appetite, educational grades and interpersonal problems like bullying and abuse [30]. Questionnaires like patient health questionnaire-2 and 9 (PHQ 2 and 9), Becks depression inventory, screening for childhood anxiety related emotional disorders (SCARED) and screening to brief intervention tool (S2BI) can be used for screening for depression, anxiety and substance use disorder respectively [38-41]. The final diagnosis of mental disorders is made using the Diagnostic and statistical manual -5 (DSM-5) criteria.
- iii) Identify the protective factors and risk factors with intention to enhance protective factors and reduce risk factors. Classify severity of risk by using a screening tool. The risk for suicide attempt recurrence is assessed by administering a self-report either in person or by writing
- iv) Impart psychoeducation, counsel the adolescent and family, activate psychosocial support and impart lethal means counselling. (**Fig. 1**)
- v) Create a safety plan. This safety plan is a written and discussed treatment plan with the adolescent and family which outlines all the protection supports and contacts in the event of a future situation of suicidal intent (**Box II**)

- vi) Facilitate treatment of identified mental illness
- vii) Enhance resilience with a planned strategy of life skills education using training manuals e.g the NIMHANS adolescent life skill series or the life skill educators' modules [42].
- viii) Impart positive parenting training sessions that include information about normative adolescent development and the vulnerability to risky behaviour under stress. Parents are counselled to provide a secure, supportive and safe home environment, to use effective communication and positive discipline techniques, to encourage a healthy lifestyle and hobbies and to inculcate life skills in their children
- ix) Make a timely referral to a psychiatrist
- x) Retain the adolescent in follow-up with proactive efforts and motivation for a minimum period of 6 months up to a maximum of 2 years. Follow up visits are scheduled once a week for 2 months, once a month in the first one year, and twice in the second year [34].

Suicide Prevention

Pediatricians can play an important role in primary and secondary prevention of adolescent suicide.

Primary Prevention Strategies

These strategies target the risk factors to mitigate the suicidal behavior in clinical and community settings and are detailed below [43, 44].

- i) *Fostering resilience*: During annual health and medical visits, pediatricians can highlight the adolescent's strengths, encourage self-efficacy, teach effective problem-solving skills, and identify protective factors, such as positive religious and spiritual beliefs and thus promote resilience [45]. Life skill education manuals can be used to facilitate these sessions [42].
- ii) *Promoting school, peer and family connectedness*: Pediatricians should screen for family, school and peer connectedness and teach strategies of authoritative parenting, assertive communication and conflict resolution to strengthen these [46,47]. Gender equality and discrimination issues should also be discussed [23]. Partnerships with NGO and medical social workers should be established to enable economic help for deprived families.
- iii) *Intervening on parent psychopathology*: Pediatricians should refer parents (of adolescents) with mental disorder to mental health professionals at the earliest [45]. Pediatricians should partner with schools to plan and



Fig. 1 Cascade for emergency care of adolescent suicidal behavior (Prepared from material available in references 34-37).

Box II Sample Safety Plan					
<i>(To be formulated by the adolescent, pediatrician and caregivers)</i>					
a) Warning signs like thoughts, images, persons, situations, events					
1.	2.	3.			
b) What I can do to distract myself immediately even without involving other people (e.g praying, relaxation, deep breathing, imagery, reverse counting from 100 to 1)					
1.	2.	3.			
c) Places and people who can help you to distract (e.g grandparents, friends, playground, mall, neighbor, relative, music, painting)					
1.	2.	3.			
d) People whom I can ask for help.					
1. Name:	Phone no:	2. Name:	Phone no:	3. Name:	Phone no:
e) Doctors, clinic, hospital, helpline that I can contact for help.					
1. Child helpline	Phone no: 1098	2. Name:	Phone no:	3. Name:	Phone no:
Reminder: I am precious. My life is precious. The one thing that is very important for me and makes my life worth living for is					
Note: Fill in the points as per your preference and choices. Think about what is practical and will work for you. Keep this safety plan handy for reference on your phone, pasted on your door etc. So that you can remind yourself that you can keep yourself safe at all times.					
Signature of adolescent		Signature of caretaker/s		Signature of pediatrician	

Prepared with material from references 30, 35-37.

implement effective school-based interventions [46]. The school-based interventions include adolescent life skill education to promote overall mental well-being and interactive talks with adolescents, parents and teachers about causes and warning signs of suicide and mental disorders like depression and anxiety. Pediatricians can utilise the ‘Living Life Positively’ manual of National Institute of Health and Family Welfare (NIHFW) to conduct these sessions [47]

Secondary Prevention Strategies

Secondary suicide prevention efforts aim at helping those identified at risk for suicide, screening and treating mental disorders [48,49]. In the outpatient setting, pediatrician can use screening questionnaire for suicidality and other mental health disorders, as previously mentioned. If there are signs of suicidality, the care cascade can be followed. For those with mental disorders, psychotherapy in form of cognitive behavior therapy, dialectical behavior therapy, interpersonal therapy, family therapy and psychopharmacology under the supervision of a psychiatrist is recommended [25,30,34]. Tele health and mHealth are potential methods to manage mental health issues in areas where there are limited mental health resources or where access to health services is restricted [50,51].

Strategies for Advocacy

IAP should update and revive the Mission Kishore Uday program launched in 2019 on adolescent suicide prevention and intervention [52,53]. IAP should organize nationwide

workshops with comprehensive gatekeeper training of pediatricians, parents, teachers and adolescents to disseminate these guidelines

Widespread community level advocacy activities for adolescent suicide prevention and intervention should be planned by IAP, in collaboration with school management and personnel, volunteers of NGOs, community leaders and health workers, religious leaders and adolescents themselves.

Prevention can be universal, selective and indicated [54]. Universal strategy is for entire population and includes suicide awareness programs, education programs for media on suicide reporting practices, and school based crisis response plans and teams. Selective strategies target risk groups (e.g. grade 10 and 12 students) and includes screening programs, gatekeeper training for teachers/parents, school personnel, peers and enhancement of accessible crisis services and referral. Indicated strategies focus on high risk individuals with early warning signs of suicide. Skill-building programs for school/college students and parent support training programs that aim at reducing risk factors, increasing protective factors and imparting life skills.

IAP should advocate for framing a comprehensive national policy for adolescent suicide prevention. This policy should be included in the national adolescent health strategy, Rashtriya Kishore Swasthya Karyakaram on priority basis [23,55]. A national registry should be

Box III Summary: IAP Consensus Guidelines for Adolescent Suicide Prevention and Intervention

1. **Suicide screening:** All adolescents should be evaluated for suicide risk by pediatricians as a part of routine healthcare visit or annual medical checkup. The two basic questions to be asked as part of universal HEEDSSS screening are: *i)* Sometimes when things get difficult, many young people think of death and even hurting/killing themselves. Have you had any such thoughts? If yes, *ii)* Have you actually tried hurting/killing yourself anytime? Additional screening tools may be utilized to assess severity, immediacy of risk and to calibrate further medical interventions.
2. **Assessment:** All adolescents should be assessed for mental wellness, strengths and disorders through HEEDSSS screening and appropriate screening tools on an annual basis. This is in addition to and independent of suicide risk assessments.
3. **Referral criteria:** All adolescents with suicidal behavior should be referred to the psychiatrist. Adolescents with high risk for suicide, psychosis and moderate/severe depression and substance use should be referred on an emergency basis.
4. **Emergency care and management:** The care cascade algorithm should be used to manage an adolescent with suicide risk. The pediatrician should provide first responder services that enables the adolescent and the family to foster hope. They should offer help, counter the feelings of hopelessness, helplessness, worthlessness, shame and guilt and prepare a safety plan.
5. **Collaborative management:** The group recommends that the pediatrician coordinates the care with the psychiatrist, counselor, social worker, educator and a psychologist for physical and mental well-being, resilience building and safety monitoring for a minimum period of 6 months.
6. **Prevention:** All pediatricians should familiarize themselves with life skills training programs that can be implemented on individual and community settings.
7. **Advocacy:** As gatekeepers for child and adolescent health, pediatricians should disseminate the guidelines to healthcare professionals, community, government and non-government agencies.

maintained for collection of accurate statistics regarding adolescent mental disorders and suicidal behavior to evaluation various preventive measures [56]. Media reporting guidelines should be implemented and regulated to avoid suicide contagion (copycat suicide). The availability of child helpline 1098 and the existing mental health services including telecounseling services should be disseminated and periodically highlighted through various media channels. Educational and examination reforms to decrease academic stress on the students should be considered. At a national level, there should be a strategy to reducing the access to means of suicide e.g., regulation of sale of organophosphorus pesticides and prescription medicines.

CONCLUSION

Pediatricians should screen adolescents for protective and risk factors of suicide/suicidal behavior, and conduct a mental health evaluation at annual healthcare visits. During these visits, they should discuss strategies with adolescents and parents to enhance protective factors and over all mental well-being. Mental disorders, if detected, should be treated at the earliest. All cases of suicidal behavior should be referred to the psychiatrist after a risk assessment and brief intervention including immediate counseling of adolescents and parents, and formulating a safety plan. Pediatricians should collaborate with mental health professionals for treatment and follow-up (**Box III**).

Note: Additional material related to this article is available at www.indianpediatrics.net

Contributors: All the authors and committee members made important intellectual contribution to the guideline document, and

have approved the final manuscript.

Funding: None; *Competing interests:* None stated.

REFERENCES

1. World Health Organisation. India Adolescent Mortality Rates. Accessed November 1, 2021. Available from: [https://www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/adolescent-mortality-ranking—top-5-causes-\(country\)](https://www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/adolescent-mortality-ranking—top-5-causes-(country))
2. Kommu JVS, Jacob P. Specialty training in child and adolescent psychiatry in India. *Eur Child Adolesc Psychiatry*. 2020;29:89-93.
3. Garg K, Kumar CN, Chandra PS. Number of psychiatrists in India: Baby steps forward, but a long way to go. *Indian J Psychiatry*. 2019;61:104-5.
4. Murthy RS. National mental health survey of India 2015-2016. *Indian J Psych*. 2017;59:21.
5. Global Accelerated Action for the Health of Adolescents (AA-HA!): guidance to support country implementation. World Health Organization;2017. Accessed December 18, 2021. Available from: <https://apps.who.int/iris/bitstream/handle/10665/255415/9789241512343-eng.pdf?sequence=1>
6. United Nations Children's Fund. The State of the World's Children 2021: On My Mind – Promoting, Protecting and Caring for Children's Mental Health. UNICEF, 2021.
7. Global Burden of Disease Study 2013 Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990-2013: A systematic analysis for the Global Burden of Disease Study 2013. *Lancet*. 2015;386:743-800.
8. Gupta S, Basera D. Youth suicide in India: a critical review and implication for the national suicide prevention policy. *Omega (Westport)*. 2021;10:302228211045169.
9. Bilsen J. Suicide and youth: Risk factors. *Front Psychiatry*. 2018; 9:540.
10. National Crime Records Bureau. Accidental Deaths and Suicide in India 2020. National Crime Records Bureau 2020. November 1, 2021. Available from: https://ncrb.gov.in/sites/default/files/ADSI_2020_FULL_REPORT.pdf

11. National Crime Records Bureau. Accidental Deaths and Suicide in India 2019. National Crime Records Bureau 2019. November 1, 2021. Available from: <https://ncrb.gov.in/en/accidental-deaths-suicides-india-2019>
12. Asarnow JR, Babeva K, Horstmann E. The emergency department: challenges and opportunities for suicide prevention. *Child Adolesc Psychiatr Clin N Am.* 2017;26:771-83.
13. Klonsky ED, Dixon-Luinenburg T, May AM. The critical distinction between suicidal ideation and suicide attempts. *World Psychiatry.* 2021;20:439-441.
14. Ougrin D, Zundel T, Ng A, et al. Trial of therapeutic assessment in London: randomised controlled trial of therapeutic assessment versus standard psychosocial assessment in adolescents presenting with self-harm. *Arch Dis Child.* 2011; 96:148-53.
15. Cornette MM, Schlotthauer AE, Berlin JS, et al. The public health approach to reducing suicide: Opportunities for curriculum development in psychiatry residency training programs. *Acad Psychiatry.* 2014;38:575-84.
16. Witt KG, Hetrick SE, Rajaram G, et al. Interventions for self-harm in children and adolescents. *Cochrane Database Syst Rev.* 2021;3:CD013667.
17. Courtney DB, Duda S, Szatmari P, et al. Systematic Review and Quality Appraisal of Practice Guidelines for Self-Harm in Children and Adolescents. *Suicide Life Threat Behav.* 2019; 49: 707-723.
18. Gilmour L, Maxwell M, Duncan E. Policy addressing suicidality in children and young people: an international scoping review. *BMJ Open.* 2019;9:e030699.
19. World Health Organization. Live life: an implementation guide for suicide prevention in countries. Geneva: World Health Organization 2021. Accessed December 1, 2021. Available from: <https://www.who.int/publications/i/item/9789240026629>
20. World Health Organization and the United Nations Children's Fund. Helping adolescents thrive toolkit: strategies to promote and protect adolescent mental health and reduce self-harm and other risk behaviours. Geneva: World Health Organization and the United Nations Children's Fund (UNICEF), 2021
21. Kiragasur RM, Raghavendra KK, Sravanti L, Seshadri S, Female Adolescents Self-Cutting. Information and management manual for caretakers of shelter homes. National Institute of Mental Health and Neuro Sciences. 2019. Accessed March 2, 2022. Available from: <https://www.nimhanschildproject.in/wp-content/uploads/2019/01/Self-Cutting-Information-and-Management-Manual.pdf>
22. Shetty BV, Rajendra KM. Self-injury and suicidal behaviour in adolescents. In: Kiragasur RM, Kommu JV, CN Kumar, Shetty VB, Parthasarathy R, Math SB. *Child and Adolescent Mental Health: A Manual for Medical officers.* National Institute of Mental Health and Neuro Sciences. NIMHANS Publication no. 176; 2020 P. 91-99. Accessed March 2, 2022. Available from: <https://nimhans.ac.in/wp-content/uploads/2020/12/Child-and-Adolescent-Mental-Health-A-Manual-for-Medical-officers.pdf>
23. Vijayakumar L, Chandra PS, Kumar MS, et al The national suicide prevention strategy in India: context and considerations for urgent action. *Lancet Psych.* 2022;9:160-68.
24. Consoli A, Cohen D, Bodeau N, et al. Risk and protective factors for suicidality at 6-month follow-up in adolescent inpatients who attempted suicide: An exploratory model. *Can J Psychiatry.* 2015; 60:S27-36.
25. Benton TD, Muhrer E, Jones JD, Lewis J. Dysregulation and suicide in children and adolescents. *Child Adolesc Psychiatr Clin N Am.* 2021;30:389-99.
26. Gururaj G, Isaac MK, Subbakrishna DK, Ranjani R. Risk factors for completed suicides: a case-control study from Bangalore, India. *Inj Control Saf Promot.* 2004;11:183-91.
27. Radhakrishnan R, Andrade C. Suicide: An Indian perspective. *Indian J Psychiatry.* 2012;54:304-19.
28. Shastri PC. Resilience: Building immunity in psychiatry. *Indian J Psychiatry.* 2013;55:224-34.
29. Doukrou M, Segal TY. Fifteen-minute consultation: Communicating with young people-how to use HEEADSSS, a psychosocial interview for adolescents. *Arch Dis Child Educ Pract Ed.* 2018; 103:15-19.
30. Shain B; Committee on Adolescence. Suicide and Suicide Attempts in Adolescents. *Pediatrics.* 2016;138:e20161420
31. Taliaferro LA, Oberstar JV, Borowsky IW. Prevention of youth suicide: The role of the primary care physician. *Journal of Clinical Outcomes Management.*2012;19:270-85.
32. Dilillo D, Mauri S, Mantegazza C, et al. Suicide in pediatrics: epidemiology, risk factors, warning signs and the role of the pediatrician in detecting them. *Ital J Pediatr.* 2015;41:49.
33. Demaso DR, Walter HJ, Wharff EA. Suicide and attempted suicide. In: Kleigman RM, Geme JS, editors. *Nelson textbook of Paediatrics*, 21st ed, Elsevier; 2019; p.159-162.
34. World Health Organisation. mhGAP intervention guide for mental, neurological and substance use disorders in non-specialized health settings: mental health Gap Action Programme (mhGAP) – version 2.0. World Health Organisation 2016. Accessed December 1, 2021. Available from: <https://www.who.int/publications/i/item/9789241549790>
35. Capoccia L, Labre M. Caring for Adult Patients with Suicide Risk: A Consensus-Based Guide for Emergency Departments. Education Development Center, Inc., Suicide Resource Prevention Center; 2015. Accessed November 28, 2021. Available from:https://www.sprc.org/sites/default/files/EDGuide_full.pdf
36. Weber AN, Michail M, Thompson A, Fiedorowicz JG. Psychiatric emergencies: assessing and managing suicidal ideation. *Med Clin North Am.* 2017;101:553-71.
37. Chun TH, Mace SE, Katz ER, American Academy of Pediatrics, Committee on Pediatric Emergency Medicine, American College of Emergency Physicians. Evaluation and management of children and adolescents with acute mental health or behavioral problems. Part I: Common clinical challenges of patients with mental health and/or behavioral emergencies. *Pediatrics.*2016;138:e20161570.
38. Russell PS, Basker M, Russell S, et al. Comparison of a self-rated and a clinician-rated measure for identifying depression among adolescents in a primary-care setting. *Indian J Pediatr.* 2012;79: S45-51.
39. Nair MKC, Russell PS, Shankar SR, et al. Adolescent suicide: characterizing the need and identifying the predictive factors for preventive consultation or hospitalization in a rural community setting. *Int J Adolesc Med Health.* 2013;25:81-6.
40. Russell PS, Nair MKC, Chandra A, et al. ADad 9: Suicidal behavior in anxiety Disorders among adolescents in a rural community population in India. *Indian J Pediatr.* 2013;80S: S175-80.
41. Borus J, Parhami I, Levy S. Screening, brief intervention, and referral to treatment. *Child Adolesc Psychiatr Clin N Am.* 2016; 25:579-601.
42. National Institute of Mental Health and Neurosciences. Adolescent Life Skills Series I and II. Developed by: Child and Adolescent Mental Health Service Project. Department of Child and Adolescent Psychiatry. NIMHANS, Bengaluru 2017 Accessed March 2, 2022. Available at: <https://nimhanschildprotect.in/adolescents-13-18-years/>
43. Mann JJ, Michel CA, Auerbach RP. Improving suicide prevention through evidence-based strategies: A systematic review. *Am J Psychiatry.*2021;178:611-24.
44. Horowitz L, Tipton MV, Pao M. Primary and secondary prevention of youth suicide. *Pediatrics.* 2020;145:S195-S203.
45. Brodsky BS, Spruch-Feiner A, Stanley B. The zero suicide

- model: Applying evidence-based suicide prevention practices to clinical care. *Front Psychiatry*. 2018;9:33.
46. Loganathan S. Targeting adolescents for mental health literacy via NIMHANS life skill education model. *Indian J Psychiatry*. 2012;54:292-3.
 47. Kumar D, Thomas Kishore M. Living Life Positively- A Facilitator's Manual for Conducting Workshops in the Domain of Life-Skills Education Stress Management And Sensitization Program for Suicide Prevention. National Institute of Health and Family Welfare, 2016. Accessed on 2 March, 2022. Available from: [https://dghs.gov.in/WriteReadData/userfiles/file/Living_Life_Positively%20\(Facilitator%20Guide\)_16_2_2017%41\).pdf](https://dghs.gov.in/WriteReadData/userfiles/file/Living_Life_Positively%20(Facilitator%20Guide)_16_2_2017%41).pdf)
 48. Burstein B, Agostino H, Greenfield B. Suicidal attempts and ideation among children and adolescents in US emergency departments, 2007-2015. *JAMA Pediatr*. 2019;173:598-600.
 49. Aroor AR, Galagali PM. Management of adolescent suicidal behaviour. *Ind J Pract Ped*. 2020;22:450-58.
 50. Galagali PM, Ghosh S, Bhargav H. The role of telemedicine in child and adolescent healthcare in India. *Curr Pediatr Rep*. 2021;1-8.
 51. Galagali PM, Brooks MJ. Psychological care in low-resource settings for adolescents. *Clin Child Psychol Psychiatry*. 2020; 25: 698-711.
 52. Shastri D. Respectful adolescent care - a must know concept. *Indian Pediatr*. 2019;56:909-10.
 53. Indian Academy of Pediatrics. Mission Kishore Uday Manual, Indian Academy of Pediatrics, 2019. Accessed December 1, 2021. Available from: <https://aha.iapindia.org/wp-content/uploads/2021/04/Manual-MKU-2018-2019.pdf>
 54. Siu AMH. Self-harm and suicide among children and adolescents in Hong Kong: A review of prevalence, risk factors, and prevention strategies. *J Adolesc Health*. 2019;64: S59-S64.
 55. Adolescent Health Division, Ministry of Health and Family Welfare Government of India. Strategy Handbook. Rashtriya Kishor Swasthya Karyakram. Government of India; 2014.
 56. World Health Organization. National suicide prevention strategies: Progress, examples and indicators. World Health Organisation 2018. Accessed November 26, 2021. Available from: <https://www.who.int/publications/item/national-suicide-prevention-strategies-progress-examples-and-indicators>

ANNEXURE

IAP Guidelines Committee on Prevention and Management of Suicidal Behavior in Adolescents

Chairpersons: MKC Nair, Digant Shastri; **Convener:** Preeti M Galagali; **Writing Committee Members:** Amitha Rao Aroor, Chitra Dinakar, Preeti M Galagali, Piyush Gupta, Chandrika Rao, Latha Ravichandran, Dheeraj Shah. **Members:** PV Arya, CP Bansal, Piyali Bhattacharya Sushma Desai, JC Garg, Atul Kanikar, Satish Pandya, Garima Saikia, RN Sharma, JS Tuteja. **Invited experts:** PS Russell (Child and Adolescent Psychiatrist), Poongodi Bala (Psychiatrist). **Rapporteur:** Kritika Agarwal. **Ex-officio:** Remesh Kumar R.

All members attended the National Consultative Meet at Bengaluru on 16 August, 2019 except CP Bansal, JS Tuteja, and Paul Russel.

Web Table I Evidence Based Strategies for Suicide Prevention

<i>Prevention strategies</i>	<i>Available evidence</i>
<i>Universal interventions</i>	
Mitigating unemployment, poverty and inequalities	Implemented by Government authorities. Unplanned studies
Restricting access to lethal means of suicide-safer designs of buildings, prisons, stringent firearm rules, limitation to pesticide access. Barriers and safety nets.	Case studies Retrospective observations. Review articles
<i>Public awareness</i>	
School based interventions, cyber bullying, monitoring bullying, Social media watch, Helplines, Accessible Mental health service	Randomized controlled trials
<i>Selective interventions</i>	
Gatekeeper training – Health personnel, teachers, priests, volunteers among parents and students	Uncontrolled studies
Vulnerable population interventions- Deaddiction, Evaluating depression, social isolation,	Randomized controlled trials
Discharge, Contract and follow up for one year minimum,	
<i>Indicated interventions</i>	
Treatment of mental disorders.	Randomized controlled trials

Prepared with material available in references 43-45.

Web Table II Screening Tools for Suicide Risk and Common Mental Disorders

<i>Screening tool</i>	<i>Web link</i>
<i>Suicide Screening</i>	
Columbia suicide severity rating scale	https://cssrs.columbia.edu/wp-content/uploads/C-SSRS_Pediatric-SLC_11.14.16.pdf
Becks depression inventory (BDI)	https://www.ismanet.org/doctoryourspirit/pdfs/Beck-Depression-Inventory-BDI.pdf
Patient health questionnaire-9: Modified for teens (PHQ-9)	https://www.aacap.org/App_Themes/AACAP/docs/member_resources/toolbox_for_clinical_practice_and_outcomes/symptoms/GLAD-PC_PHQ-9.pdf
Adolescent Suicide- Screening Questionnaire (ASQ):	https://www.nimh.nih.gov/research/research-conducted-at-nimh/asq-toolkit-materials/asq-tool/asq-screening-tool
<i>Depression screening</i>	
Patient health questionnaire-2 (PHQ-2), PHQ-9 and BDI	https://aidsetc.org/sites/default/files/resources_files/PHQ-2_English.pdf
<i>Anxiety disorder screening</i>	
Screen for child anxiety related emotional disorders (SCARED)	https://www.ohsu.edu/sites/default/files/2019-06/SCARED-form-Parent-and-Child-version.pdf
<i>Substance use disorder screening</i>	
Screening to brief intervention tool	https://www.drugabuse.gov/ast/s2bi/#/