

CADTH Reference List

Pharmacological and Non-Pharmacological Vaping Cessation Interventions for Youth

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Key Messages

- One systematic review was identified regarding the clinical effectiveness of pharmacological and non-pharmacological interventions for vaping cessation in youth.
- One evidence-based guideline was identified regarding interventions for vaping cessation in youth.

Research Questions

1. What is the clinical effectiveness of pharmacological and non-pharmacological interventions for vaping cessation in youth?
2. What are the evidence-based guidelines regarding interventions for vaping cessation in youth?

Methods

Literature Search Methods

A limited literature search was conducted by an information specialist on key resources including MEDLINE, the Cochrane Database of Systematic Reviews, the international HTA database, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search strategy comprised both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were vaping and cessation. No filters were applied to limit retrieval by study type. Comments, newspaper articles, editorials, and letters were excluded. Where possible, retrieval was limited to the human population. The search was also limited to English-language documents published between January 1, 2020 and April 28, 2021 as a partial update to the 2020 CADTH report on smoking cessation in youth.⁴ Internet links were provided, where available.

Selection Criteria

One reviewer screened literature search results (titles and abstracts) and selected publications according to the inclusion criteria presented in Table 1. Full texts of study publications were not reviewed. Open-access, full-text versions of evidence-based guidelines were reviewed when abstracts were not available.

Results

One systematic review was identified regarding the clinical effectiveness of pharmacological and non-pharmacological interventions for vaping cessation in youth.¹ One evidence-based guideline was identified regarding interventions for vaping cessation in youth.² No relevant

Table 1: Selection Criteria

Criteria	Description
Population	Youth (15 to 24 years of age) who use vaping products
Intervention	Pharmacological vaping cessation interventions (e.g., nicotine replacement therapy, cytisine, varenicline) and non-pharmacological vaping cessation interventions (e.g., educational materials, behavioural therapy, telephone- or text-based counselling, etc.)
Comparator	Q1: Usual care, any other pharmacological or non-pharmacological intervention, no treatment, placebo Q2: No comparator
Outcomes	Q1: Clinical effectiveness (e.g., reduction or cessation in vaping, relapse, quit attempts, quality of life, adverse events) Q2: Recommendations regarding best practices (e.g., pharmacological or non-pharmacological intervention use, care settings, intervention duration)
Study designs	HTAs, SRs, RCTs, non-randomized studies, evidence-based guidelines

HTA = health technology assessment; Q = question; RCT = randomized controlled trial; SR = systematic review.

health technology assessments, randomized controlled trials, or non-randomized studies were identified.

Additional references of potential interest that did not meet the inclusion criteria are provided in Appendix 1.

References

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

1. Selph S, Patnode C, Bailey SR, Pappas M, Stoner R, Chou R. Primary care-relevant interventions for tobacco and nicotine use prevention and cessation in children and adolescents: updated evidence report and systematic review for the US Preventive Services Task Force. *JAMA*. 2020 04 28;323(16):1599-1608. [PubMed](#)

Randomized Controlled Trials

No literature identified.

Non-Randomized Studies

No literature identified.

Guidelines and Recommendations

2. U.S. Preventive Services Task Force, Owens DK, Davidson KW, et al. Primary care interventions for prevention and cessation of tobacco use in children and adolescents: US Preventive Services Task Force recommendation statement. *JAMA*. 2020 04 28;323(16):1590-1598. [PubMed](#)

Appendix 1: References of Potential Interest

Previous CADTH Reports

3. Khangar SD, McGill SC. Pharmacological interventions for vaping cessation. *Can J Health Tech.* 2021;1(4). Available from: <https://cadth.ca/sites/default/files/rr/2021/RC1357%20Vaping%20Cessation%20Guidelines%20Final.pdf>. Accessed 2021 May 4.
4. Lachance C, Frey N. Non-pharmacological and pharmacological intervention for smoking cessation programs in youth: a review of clinical effectiveness and guidelines. (*CADTH rapid response report: summary with critical appraisal*). Ottawa (ON): CADTH; 2020 Feb: <https://cadth.ca/sites/default/files/pdf/htis/2020/RC1235%20Smoking%20Cessation%20Youth%20Final.pdf>. Accessed 2021 May 4.
5. Li Y, Frey N. Nicotine replacement therapy for vaping cessation in adults: clinical effectiveness. (*CADTH rapid response report: reference list*). Ottawa (ON): CADTH; 2020 Feb: <https://cadth.ca/sites/default/files/pdf/htis/2020/RA1091%20NRT%20Vaping%20Final.pdf>. Accessed 2021 May 4.

Randomized Controlled Trials

Unclear Population

6. Sahr M, Kelsh S, Blower N, Sohn M. Pilot study of electronic nicotine delivery systems (ENDS) cessation methods. *Pharmacy (Basel)*. 2021 Jan 14;9(1):14. [PubMed](#)

Guidelines and Recommendations

Unclear Methodology

7. Protecting children and adolescents against the risks of vaping. Ottawa (ON): Canadian Paediatric Society; 2021 Apr 14: <https://www.cps.ca/en/documents/position/protecting-children-and-adolescents-against-the-risks-of-vaping>. Accessed 2021 May 4
See: Treatment approaches; Recommendations #5, 6

Review Articles

8. Berg CJ, Krishnan N, Graham AL, Abrams LC. A synthesis of the literature to inform vaping cessation interventions for young adults. *Addict Behav.* 2021 Mar 08;119:106898. [PubMed](#)
9. Burt B, Li J. The electronic cigarette epidemic in youth and young adults: a practical review. *JAAPA.* 2020 Mar;33(3):17-23. [PubMed](#)
10. Gaiha SM, Halpern-Felsher B. Public health considerations for adolescent initiation of electronic cigarettes. *Pediatrics.* 2020 05;145(Suppl 2):S175-S180. [PubMed](#)
11. Liu J, Gaiha SM, Halpern-Felsher B. A breath of knowledge: overview of current adolescent e-cigarette prevention and cessation programs. *Curr Addict Rep.* 2020 Nov 12:1-13. [PubMed](#)

Additional References

12. Helping teens quit: teen tobacco cessation and education resources. Chicago (IL): American Lung Association; 2020: <https://www.lung.org/quit-smoking/helping-teens-quit>. Accessed 2021 May 4.
13. Teen cessation tools. Reno (NV): Nevada Tobacco Prevention Coalition <http://www.tobaccofreenv.org/priorities/nevada-youth-anti-vaping-campaign/teen-cessation-tools/>. Accessed 2021 May 4.
14. Youth-centered tobacco prevention & cessation programs & resources: free educational programs. Raleigh (NC): North Carolina Department of Health and Human Services; 2020: <https://tobaccopreventionandcontrol.ncdhhs.gov/youth/Documents/TobaccoPreventionCessationProgramResources-for-YoungPeople.pdf>. Accessed 2021 May 4.