



Clinical Intervention for Vaping: Nicotine and Cannabis

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Disclosures

None

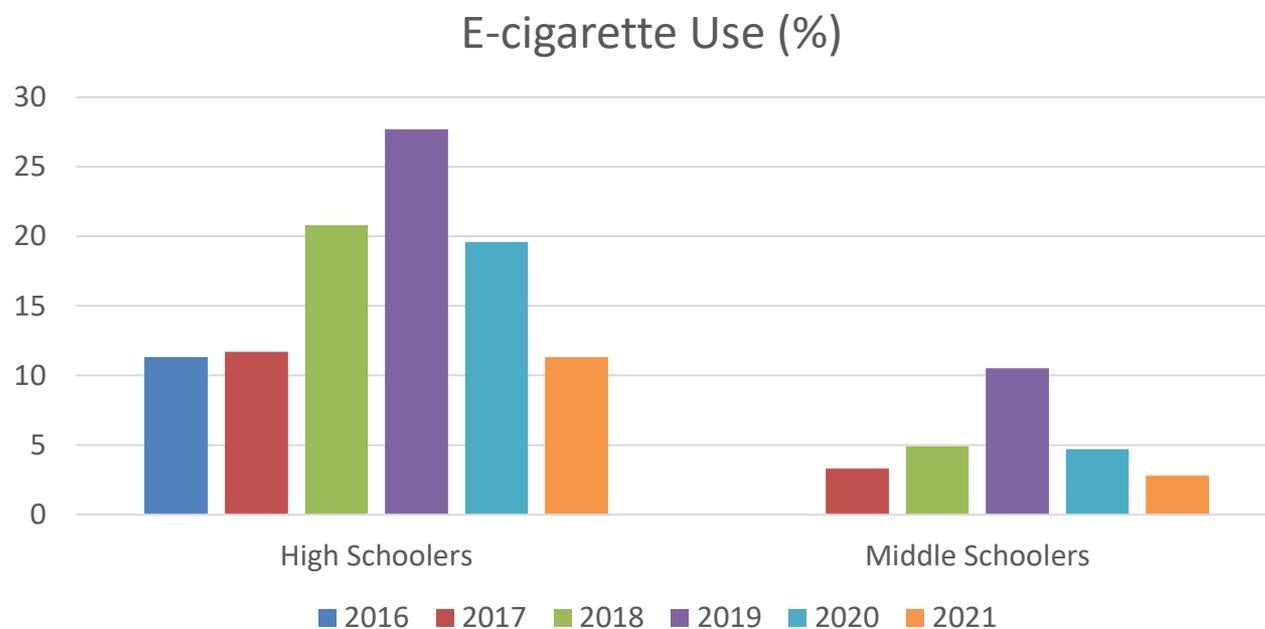


Learning Objectives

- Describe the mechanism of vaping devices and their clinical impact
- Review the current evidence for use of behavioral interventions in vaping cessation
- Analyze the evidence for the use of pharmacological interventions for vaping of nicotine and cannabis

Prevalence: Nicotine

2.06 million US youth still use e-cigarettes

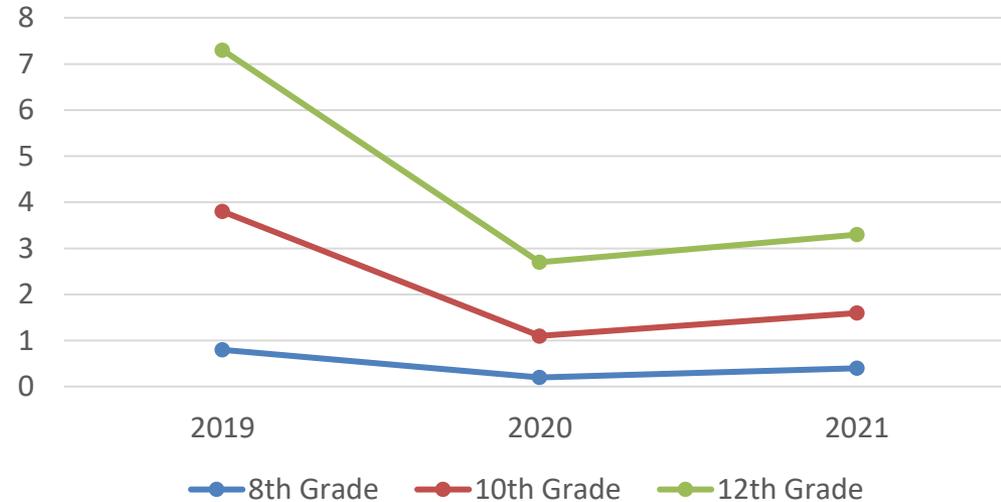


National Youth Tobacco Survey 2021



Prevalence: Cannabis

Vaping Cannabis: MTF 2021



- Lifetime prevalence of cannabis vaping increased from **6.1%** in 2013 to **13.6%** in 2020. 30-day prevalence increased from **1.6%** to **8.4%** in the same period. (Slomski A, 2022)



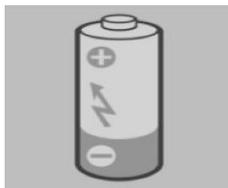
Devices and Parts

Closed System	Open System
Cig-a-likes Pod based Disposable	Vape pens Mods





Devices and Parts



Battery



Atomizer



E-Liquid

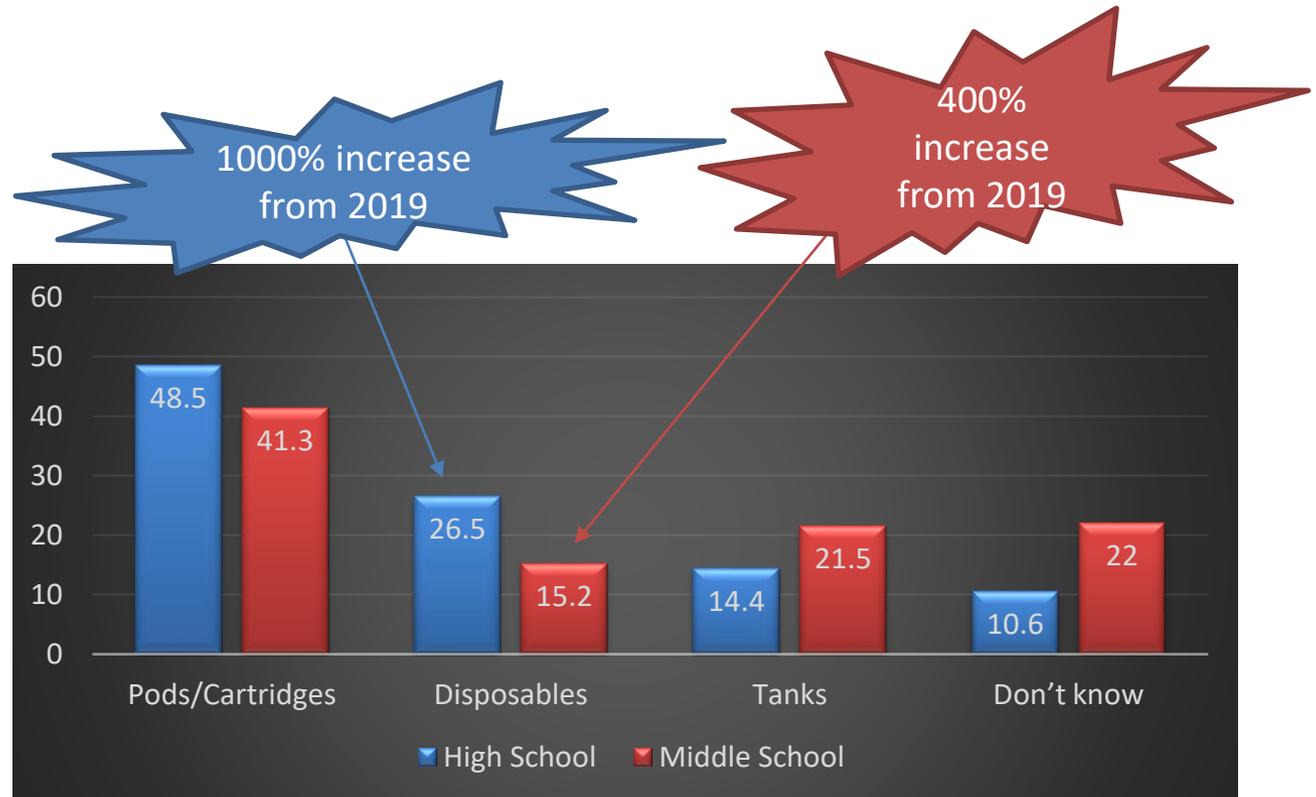


Cartridge



Aerosol

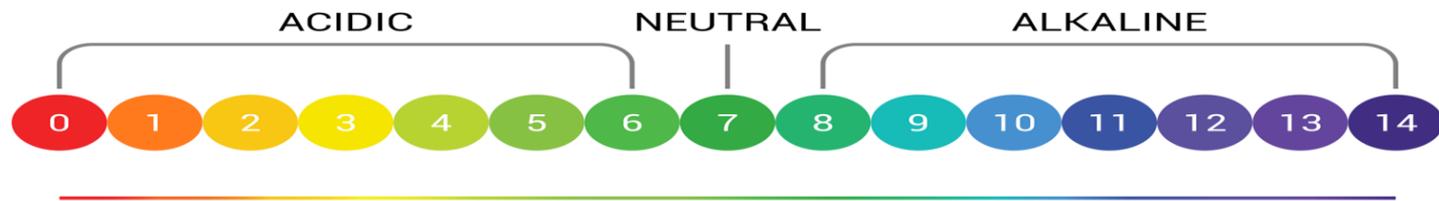
Usage by device type

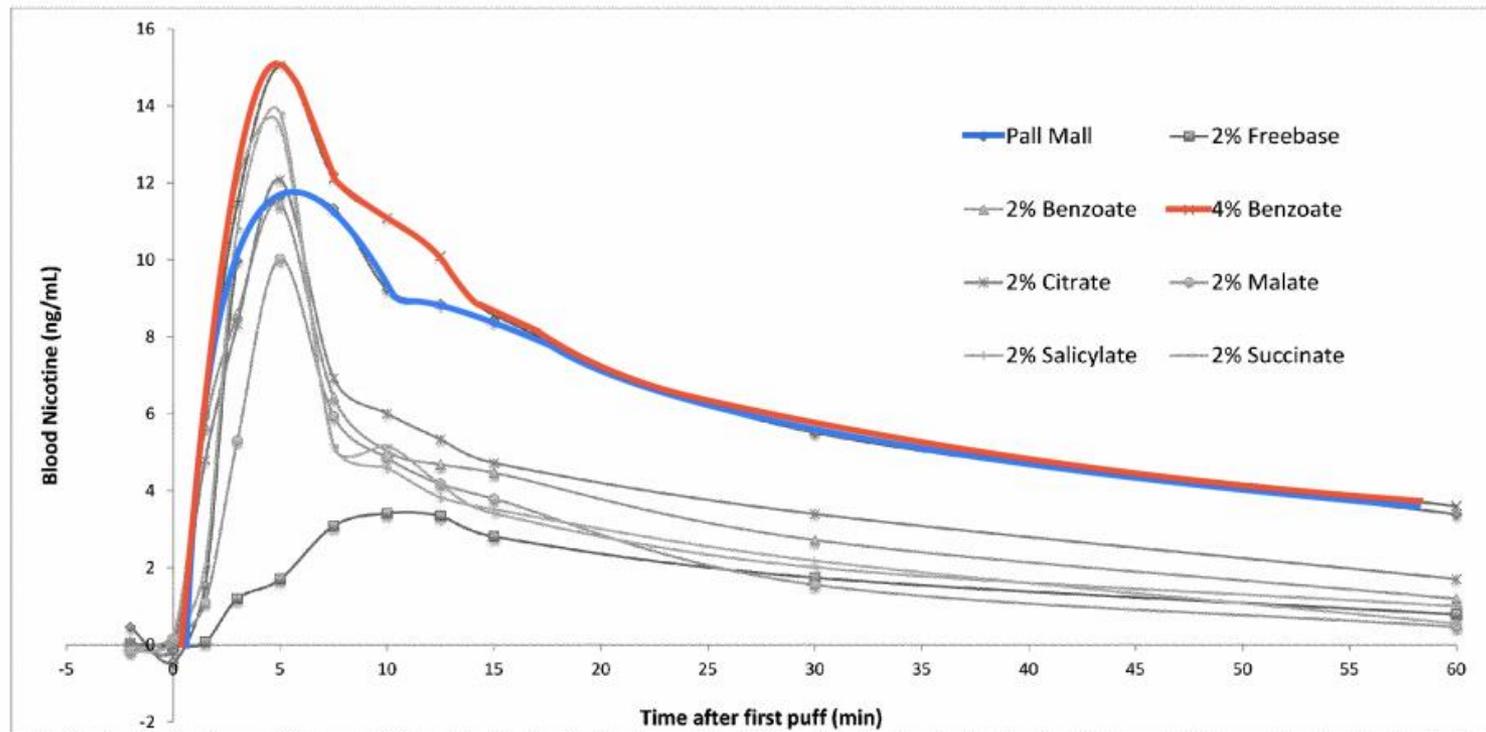


Wang TW, Neff LJ, Park-Lee E, Ren C, Cullen KA, King BA. E-cigarette Use Among Middle and High School Students — United States, 2020. MMWR Morb Mortal Wkly Rep. ePub: 9 September 2020



Nicotine's new form: Salt Nic





(Source: Class action law suit in California against Juul labs. colgate-et-al-v-juul-labs-inc-et-al)



Cannabis: Old Plant, New Leaves

- Delta 9 THC and CBD are the main psychoactive ingredients of concern.
- Preference for more potent cannabis oil/concentrate increasing over dried herb. Typical THC in cannabis oil/concentrate is **70%** or higher compared to **21%** in herbal cannabis.



Clinical Frameworks

- 5As (**A**sk, **A**dvice, **A**ssess, **A**ssist and **A**rrange) *US Public Health Service*
- SBIRT (**S**creening, **B**rief Intervention, **R**eferral to Treatment) *SAMHSA*
- ACT (**A**sk – **C**ounsel – **T**reat) *American Academy of Pediatrics*



ASK/Screening

- AAP recommends annual screening for tobacco and other substance use starting at age 11.
- Use of validated screening instruments.
 - Screening to Brief Intervention (S2BI)
 - Brief Screen for Alcohol, Tobacco and Other Drugs (BSTAD)
 - Car-Relax-Alone-Forget-Friends-Trouble(CRAFFT) version 2.1 + N



Outcome from Screening

- Responding to a negative screen.
- Following up on a positive screen.
 - Frequency
 - E-Liquid content
 - Device and Parts
 - Cessation History
 - Psychiatric History
- Checklists: Hooked on Nicotine Checklist – Vaping (HONC) and Modified Fagerstorm.

Counsel/Brief Intervention

- Motivational Interviewing techniques/Brief Negotiated Interview
- Readiness ruler
- 5R's (Relevance, Risks, Rewards, Roadblocks, Repetition)
- 2-week challenge
- 5C's for parents (Cash, Credit Card, Car, Cell Phone, Curfew)



Counsel/Brief Intervention... Contd

- Psychotherapy
 - Cognitive Behavior Therapy
 - Motivational Enhancement Therapy
 - Contingency Management
- Self Help:
 - Telephone (1-800-QUIT-NOW)
 - Text based intervention (eg: This is Quitting, My life my quit)
 - Apps (eg: Quitnow!)



Pharmacotherapy for Nicotine

- **Nicotine Replacement Therapy**

- Combined therapy with a nicotine patch and a short-acting nicotine product for breakthrough cravings is recommended.
- Nicotine patch: dose according to number of nicotine cartridges used per day
 - <math><1/2</math> cartridge/day (=0–25 mg of nicotine salts): 7 mg patch
 - - 1–2 cartridges/day (= 50–100mg of nicotine salts): 21 mg patch
- Administer patch for 4–6 weeks, then administer the next lowest dose patch for 2–4 weeks and continue to wean until patient tolerates no nicotine.
- Short-acting nicotine (for break through cravings)
 - Gum: Use one piece (2 or 4 mg) every 1 to 2 hours. (After chewing into piece and tasting nicotine, gum should be ‘parked’ between oral gums and cheek for best absorption.)
 - Lozenge: Use one lozenge (1, 2 or 4 mg) every 1 to 2 hours.

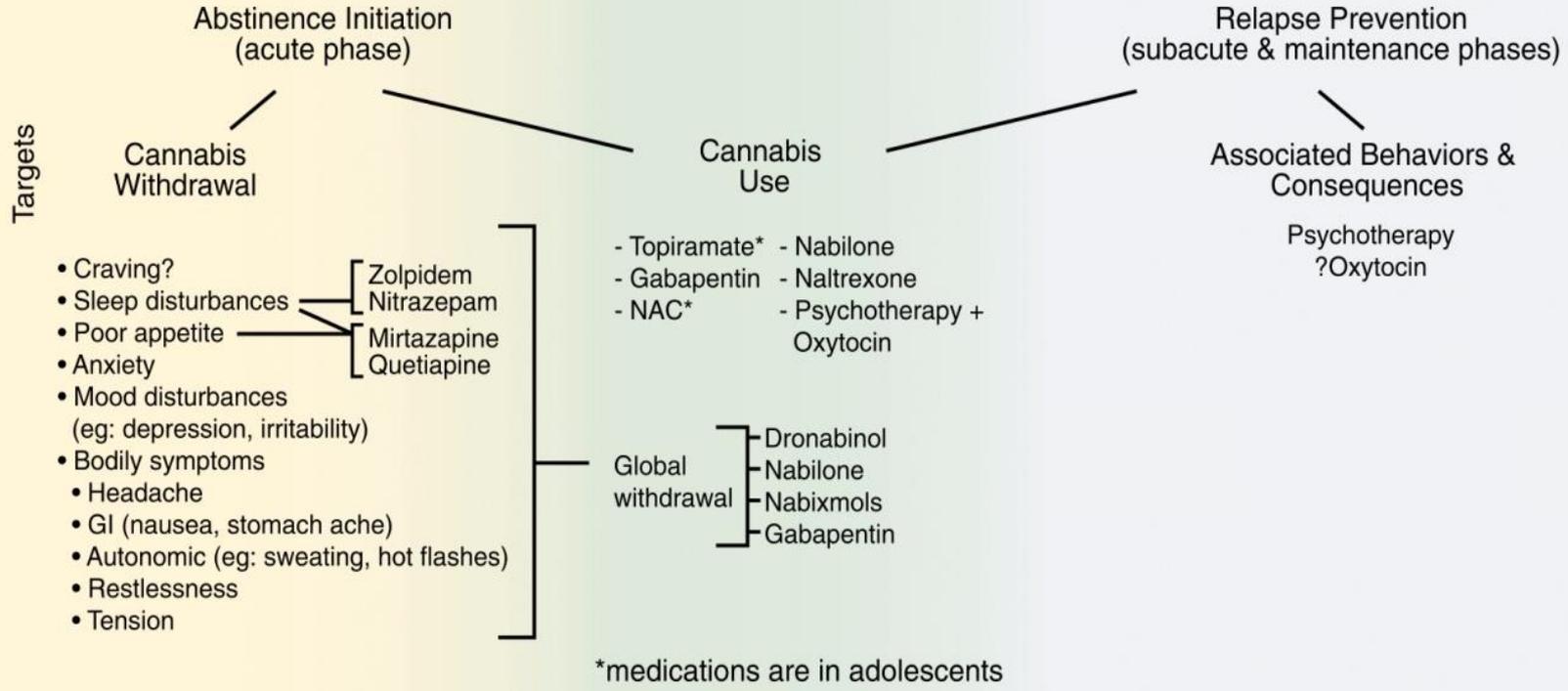


Pharmacotherapy for Nicotine... Contd

- **Bupropion (Approved for adults ≥ 18 ; off-label use for youth under 18)**
 - Begin treatment one week before target quit date.
 - Bupropion SR 150 mg by mouth once daily for 3 days, then increase to 150 mg by mouth twice daily.
 - After 2–3 months, may consider discontinuing medication; however, continued treatment with bupropion may support ongoing cessation for up to a year, and some patients may choose to remain on the medication even longer.
- **Varenicline (Approved for adolescents and adults ≥ 17)**
 - Guidance based on quit date available on their package insert.

Pharmacotherapy for Cannabis

Targets and Off-label Medications for Cannabis Use Disorder Treatment



*medications are in adolescents

Neuropsychopharmacology



Challenges:

- Integration into EMR and longitudinal follow up.
- Billing Codes → [AAP Coding Fact Sheet](#)
- Resources in the area
- Confidentiality



Resources for parents

- [Become An Ex](#) (a Truth Initiative resource)
- [Know The Risks](#) (an initiative from the US Surgeon General)
- [Talk Vaping With Your Teen](#) (an initiative from the American Lung Association).

Thank you

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