



Primary Care **NEWSFLASH**

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Disclosures

- None

Overview



Immunization update:

PCV- 13
HPV



PrEP for HIV:

Truvada & Descovy
On-Demand PrEP



Asthma:

2019 GINA Guidelines

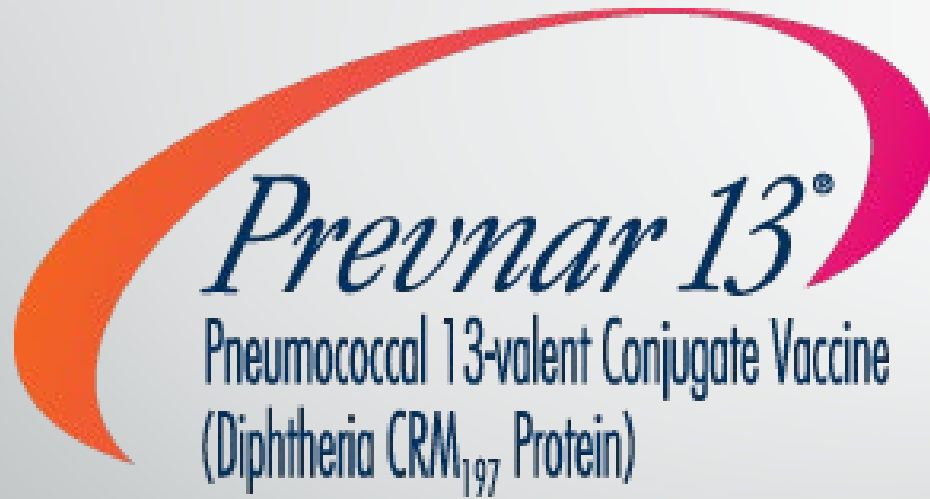


E-cigarettes and EVALI:

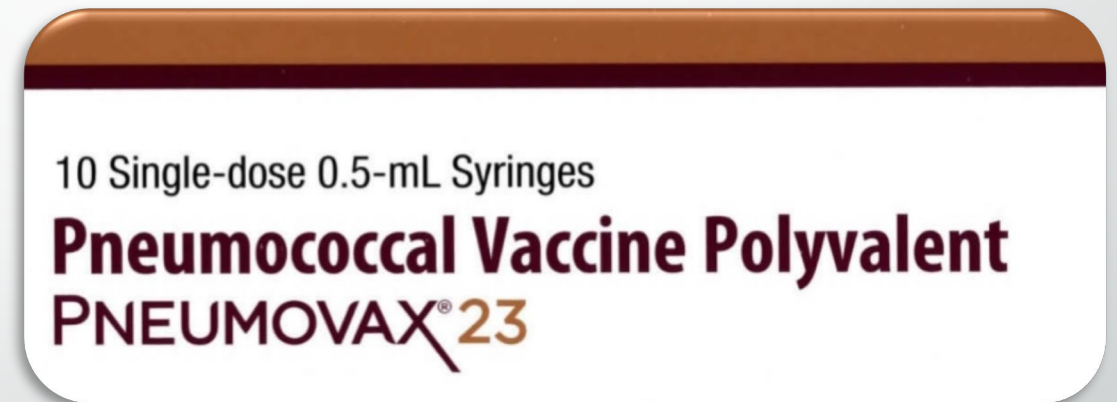
EVALI Outbreak
E-cigs for Smoking Cessation



Pneumococcal Vaccinations



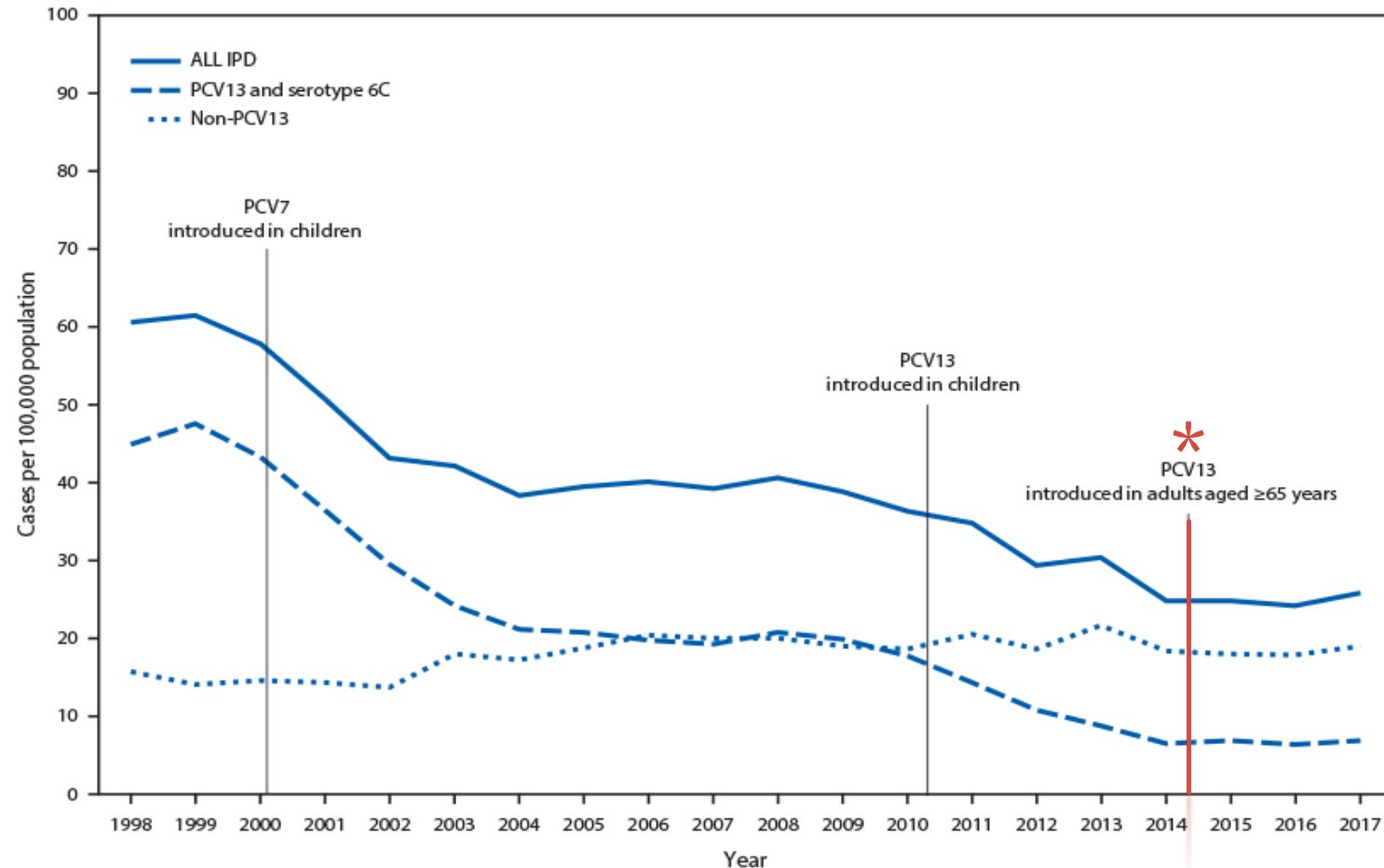
PCV-13



PPSV₂₃

The State of Invasive Pneumococcal Disease...

FIGURE. Invasive pneumococcal disease (IPD) incidence among adults aged ≥ 65 years, by pneumococcal serotype* — United States, 1998–2017



Source: Active Bacterial Core Surveillance, unpublished data, 2019.



2019 Updated Guideline

PCV-13

- **Shared clinical decision making:**

Administer based on shared clinical decision making, 1 dose of PCV-13 for immunocompetent adults ≥ 65 years old



PPSV-23

- **Routine Vaccination:**

1 dose of PPSV23 for immunocompetent adults ≥ 65 years old





Facts Supporting the Guideline Change

- Limited opportunity for benefit to adults
 - Declining IPD rates and *S. pneumoniae* epidemiology
- Cost of PCV-13
 - \$200,000+ per QALY gained.
- High Number needed to Vaccinate
 - 20,000+ adults needed to prevent 1 case of IPD per year
 - 1,100+ adults needed to prevent 1 case of outpatient PCV-13 type pneumococcal PNA per year



Populations to Consider Vaccinating

- Patient's risk of exposure to PCV-13 containing serotypes (ex. long term care residents).
- Persons residing in areas with low pediatric PCV-13 uptake
- Persons traveling to areas with no pediatric PCV-13 program
- Patient's risk of developing IPD as a results of other chronic medical conditions
- Patient preference



HPV Vaccination: A Brief Update





2019 ACIP Guideline

- Continue to routinely vaccinate adolescents (11-12 year olds)
- Catch-up HPV vaccination recommended for all persons through age 26
- For adults 27-45, use shared decision making to decide on catch-up vaccination, although at the public health level benefit is minimal.
- Applies to both men and women.

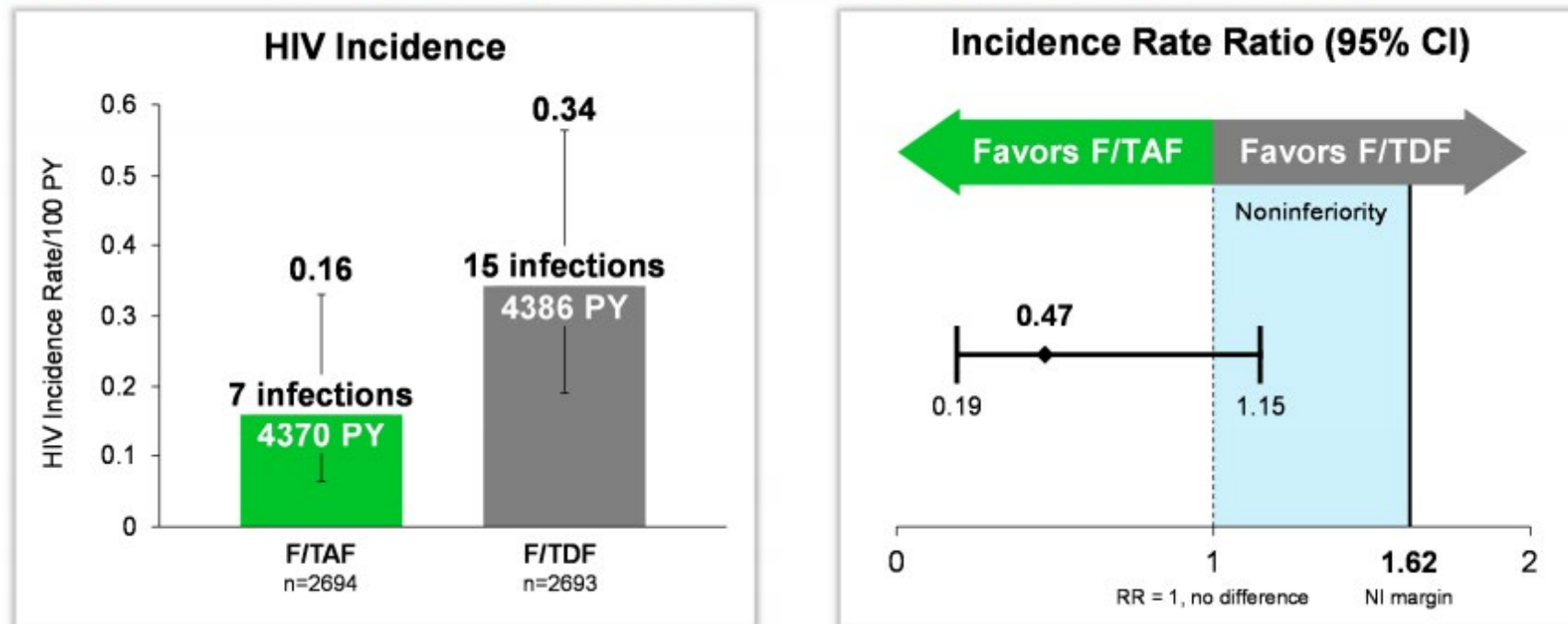


PrEP for HIV Update



DISCOVER Trial

Figure 5. DISCOVER: HIV Incidence and Incidence Rate Ratio at the Primary Efficacy Endpoint



*Study population only includes MSM



DISCOVER Safety Endpoints

Table. Effectiveness, Safety, and Cost of TDF-FTC and TAF-FTC for HIV PrEP		
Variable	TDF-FTC	TAF-FTC
Effectiveness, %*		
MSM and transgender women	~99	~99
Heterosexual women and men	~99	Unknown
Persons who inject drugs	74 to 84	Unknown
Changes in safety parameters at 48 wk (4, 9)		
Mean estimated glomerular filtration rate, mL/min/1.73 m ²	-2.0	+2.0
Mean hip bone mineral density, %	-1.0	+0.2
Median fasting low-density lipoprotein cholesterol level		
mmol/L	-0.17	+0.03
mg/dL	-6.5	+1.0
Mean body weight, kg	0	+1.1
Cost		
Average wholesale price per month, \$	2110	2110
Year in which generic version will be available	2020	2022 to 2025

MSM = men who have sex with men; PrEP = preexposure prophylaxis; TDF-FTC = tenofovir disoproxil fumarate with emtricitabine; TAF-FTC = tenofovir alafenamide with emtricitabine.
* Effectiveness estimates for TDF-FTC are from the Centers for Disease Control and Prevention (www.cdc.gov/hiv/risk/estimates/prevention_strategies.html).



Descovy for PrEP: Other Considerations

- Drug Cost and Insurance Coverage
 - Generic FTC/TDF - Sept 2020
- Descovy for Women?
- Side effects for HIV vs. PrEP patients

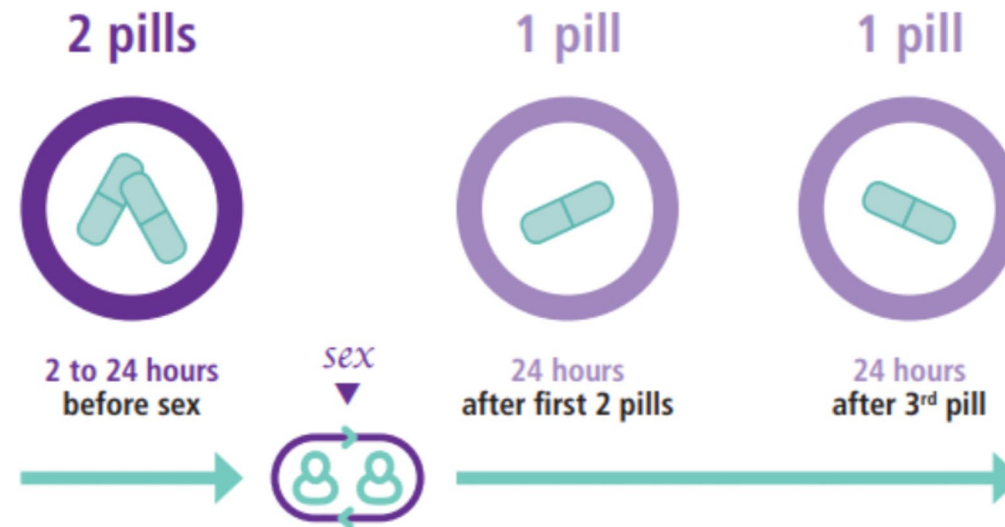
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What's the 2 + 1 + 1?

- "Event Driven" PrEP for **MSM** patients

Fig. 1. Schematic of how to take ED PrEP (the 2+1+1)





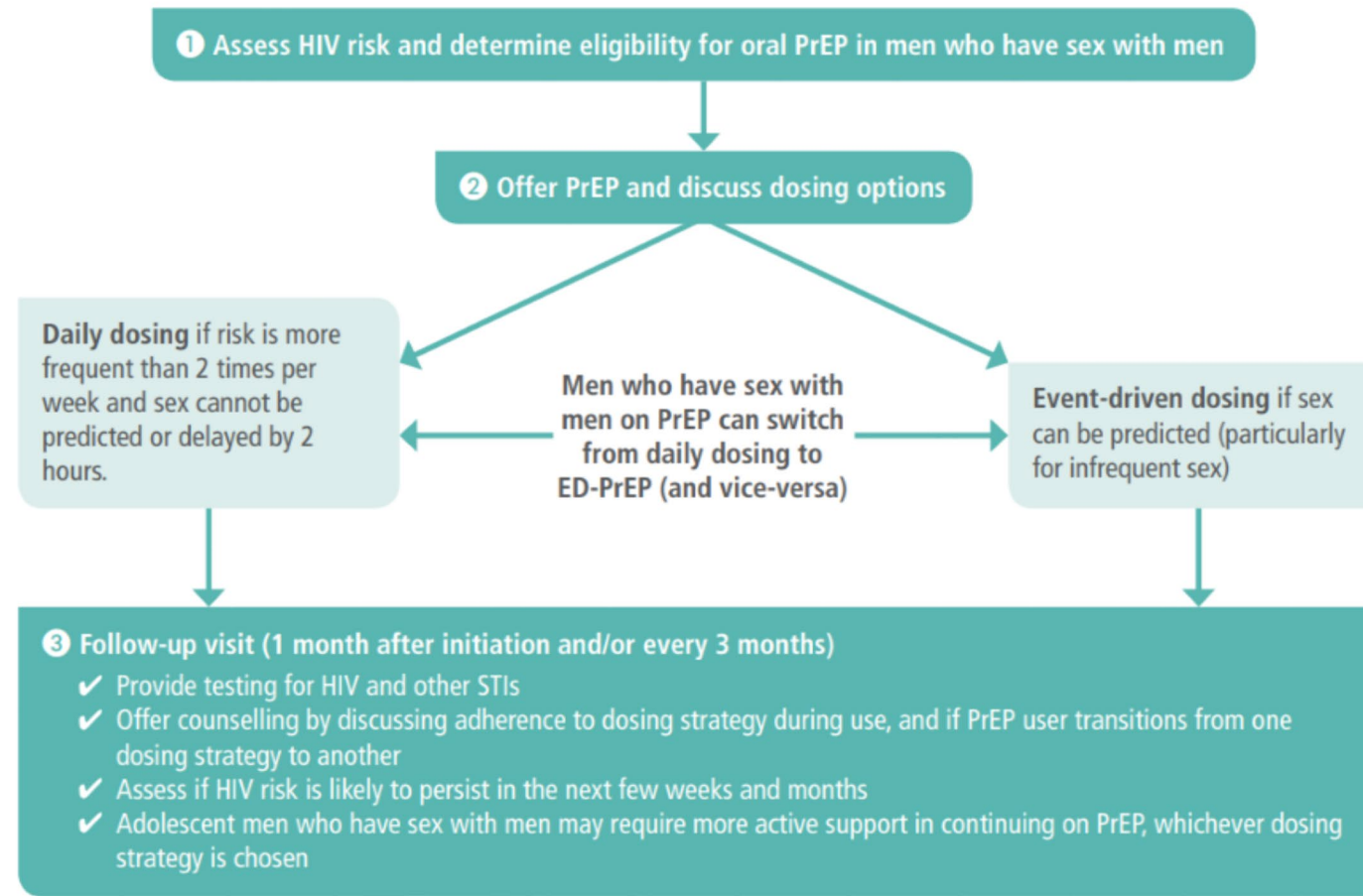
Who can use ED-PrEP?

Table 2. When ED-PrEP could be considered

For whom is ED-PrEP appropriate?	For whom is ED-PrEP NOT appropriate?
<ul style="list-style-type: none">• a man who has sex with another man:<ul style="list-style-type: none">– who would find ED-PrEP more effective and convenient– who has infrequent sex (for example, sex less than 2 times per week on average)– who is able to plan for sex at least 2 hours in advance, or who can delay sex for at least 2 hours	<ul style="list-style-type: none">• cisgender women or transgender women• transgender men having vaginal/frontal sex• men having vaginal or anal sex with women• people with chronic hepatitis B infection.

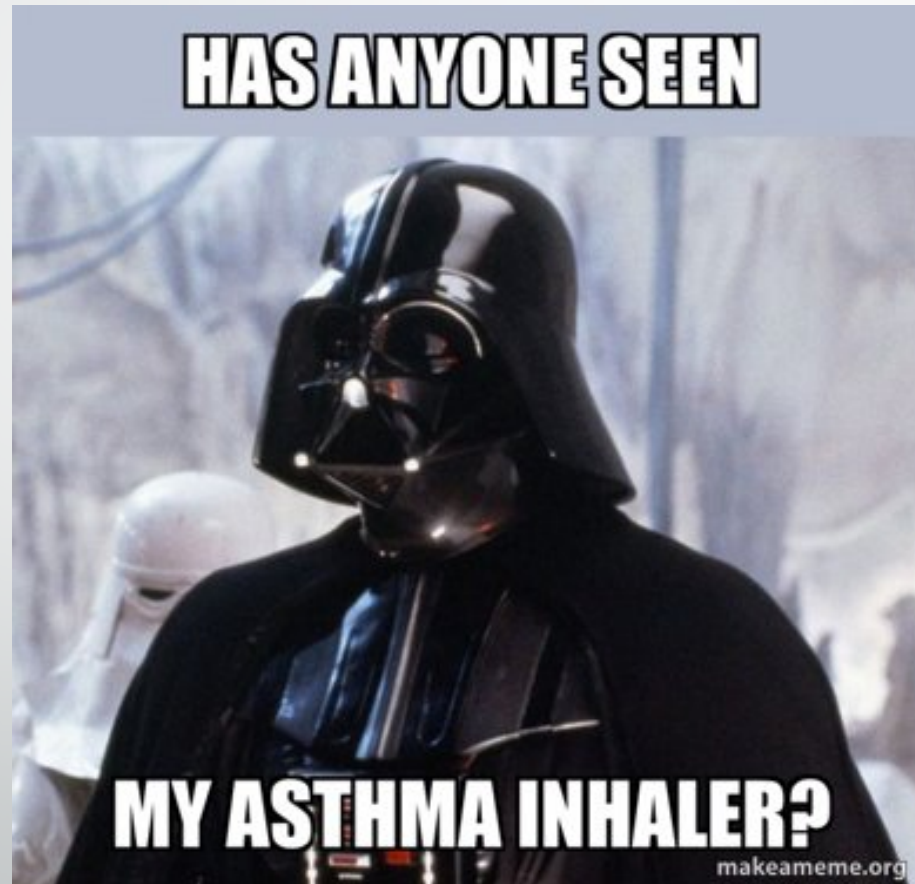


Fig. 2. Proposed algorithm for PrEP providers when considering how to offer ED-PrEP





Asthma: GINA 2019 Guidelines





Asthma: "Classic" Step Therapy

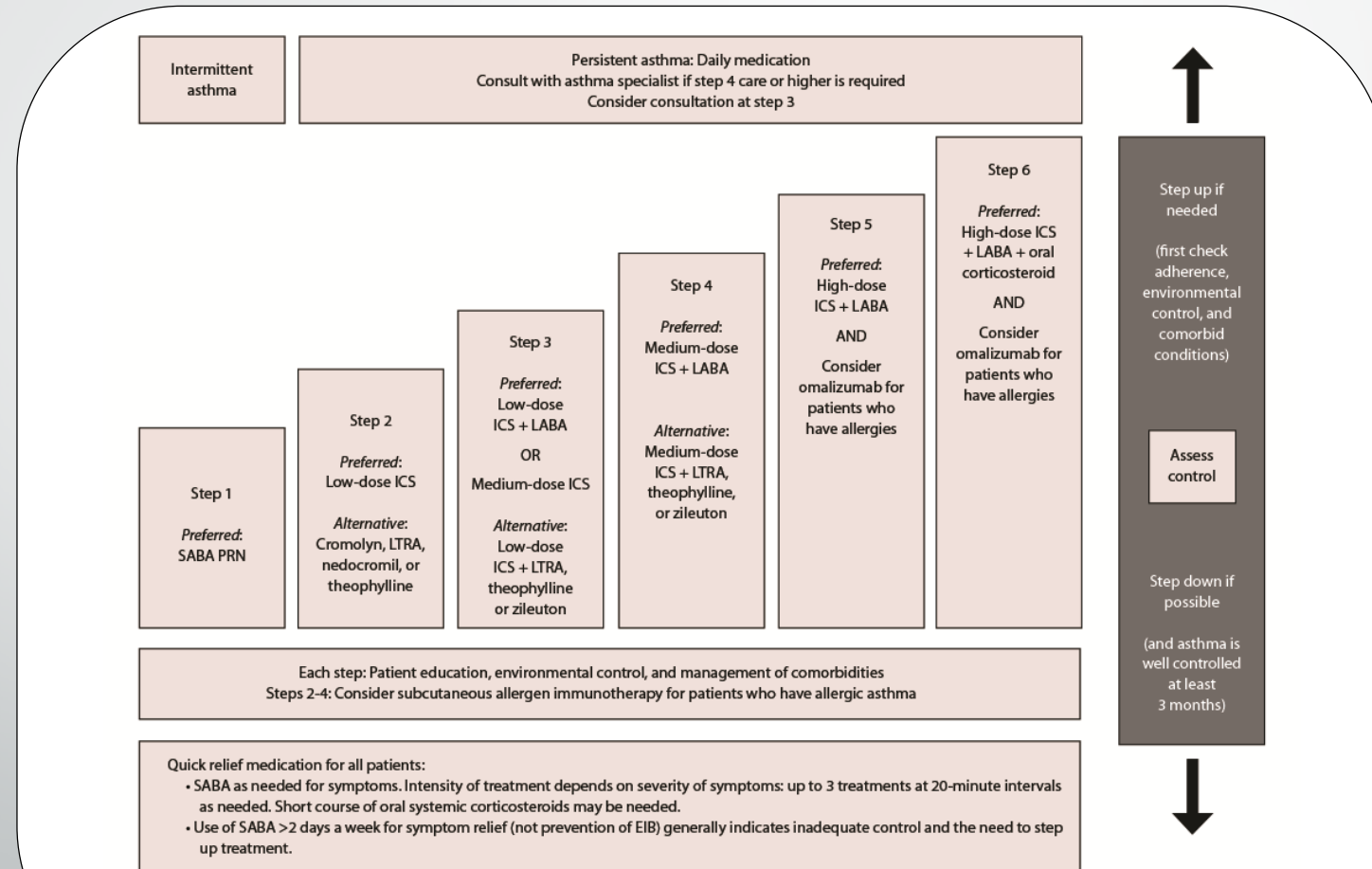
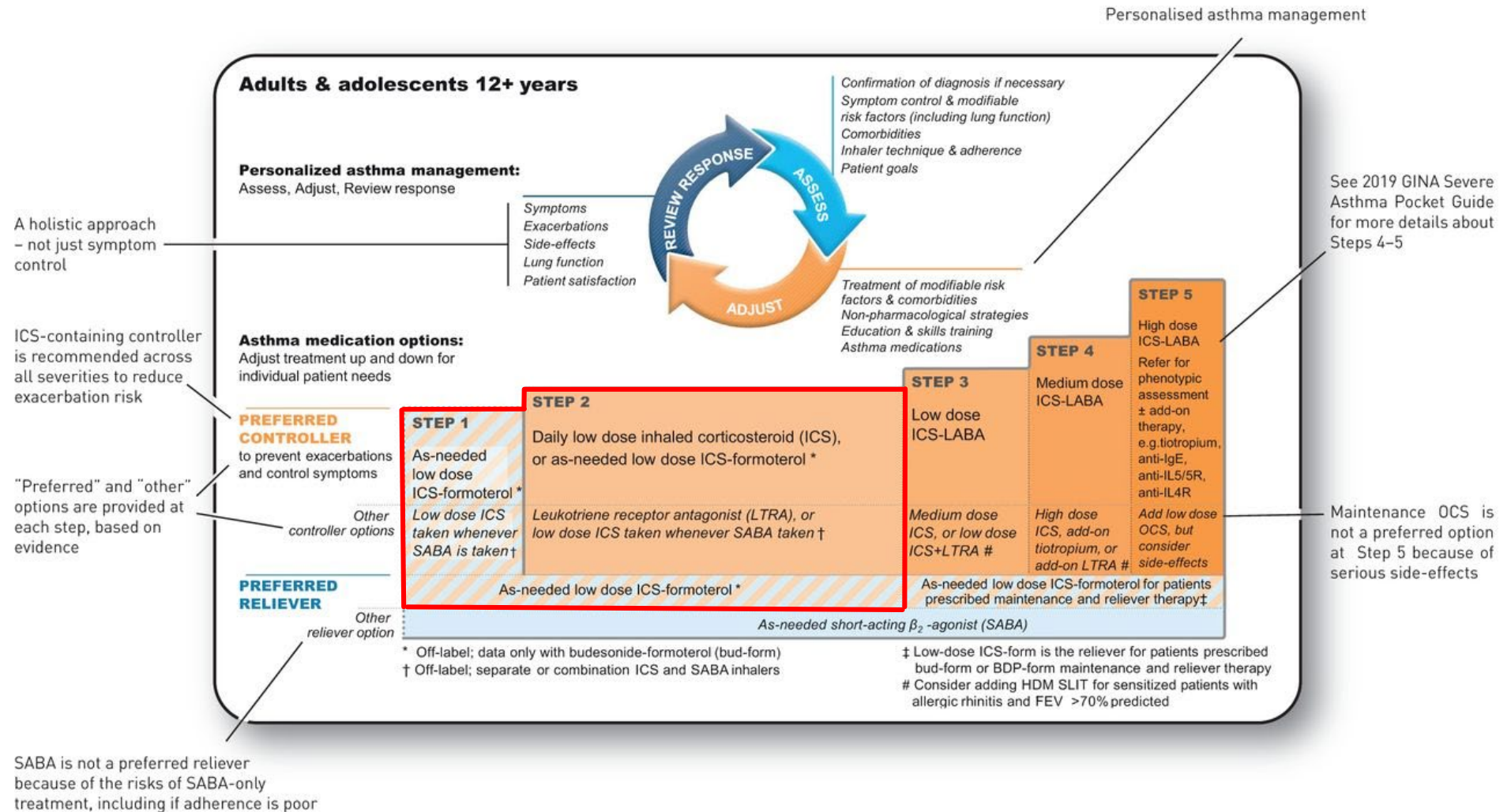


Figure. Stepwise approach for managing asthma in adults. EIB = exercise-induced bronchospasm; ICS = inhaled corticosteroids; LABA = long-acting β -agonists; LTRA = leukotriene-receptor agonists; SABA = short-acting β -agonists.



GINA 2019 Treatment Recommendations





Prominent Primary Literature

SMART Meta-analysis, JAMA 2018

- Budesonide-formoterol PRN reduces asthma exacerbations compared to ICS or ICS-LABA used daily

SYGMA-1 Trial, NEJM 2018

- Budesonide-formoterol PRN is superior to terbutaline but inferior to budesonide maintenance therapy for control of symptoms

SYGMA-2 Trial, NEJM 2018

- Budesonide-formoterol PRN was non-inferior to budesonide maintenance therapy for preventing exacerbations



Challenges

- Cost of inhalers: SABA vs ICS vs ICS-LABA
- New strategies are "off-label" use
- Which asthma patients benefit?
 - Must consider risk reduction for death and exacerbations at a population level.
- Are there any patients who can safely use SABA alone?
- So far, new strategies have not been adopted by US- based specialty groups.



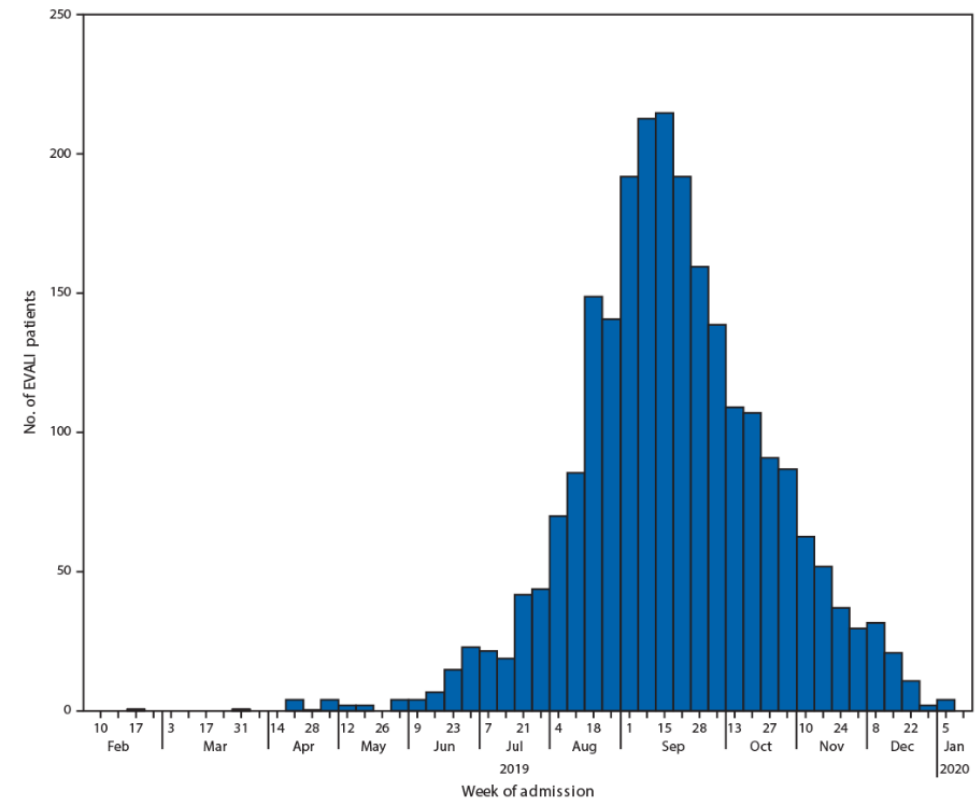
E-Cigarettes for the Internist



EVALI and the 2019 Epidemic

- As of Jan 21st, 2020:
 - 2,711 hospitalized EVALI cases from 50 states, DC, and US territories
 - 60 confirmed deaths, age ranged 15-75 years old
- Outbreak peaked in September 2019
 - Patients reported using THC and nicotine containing products from commercial and informal sources.

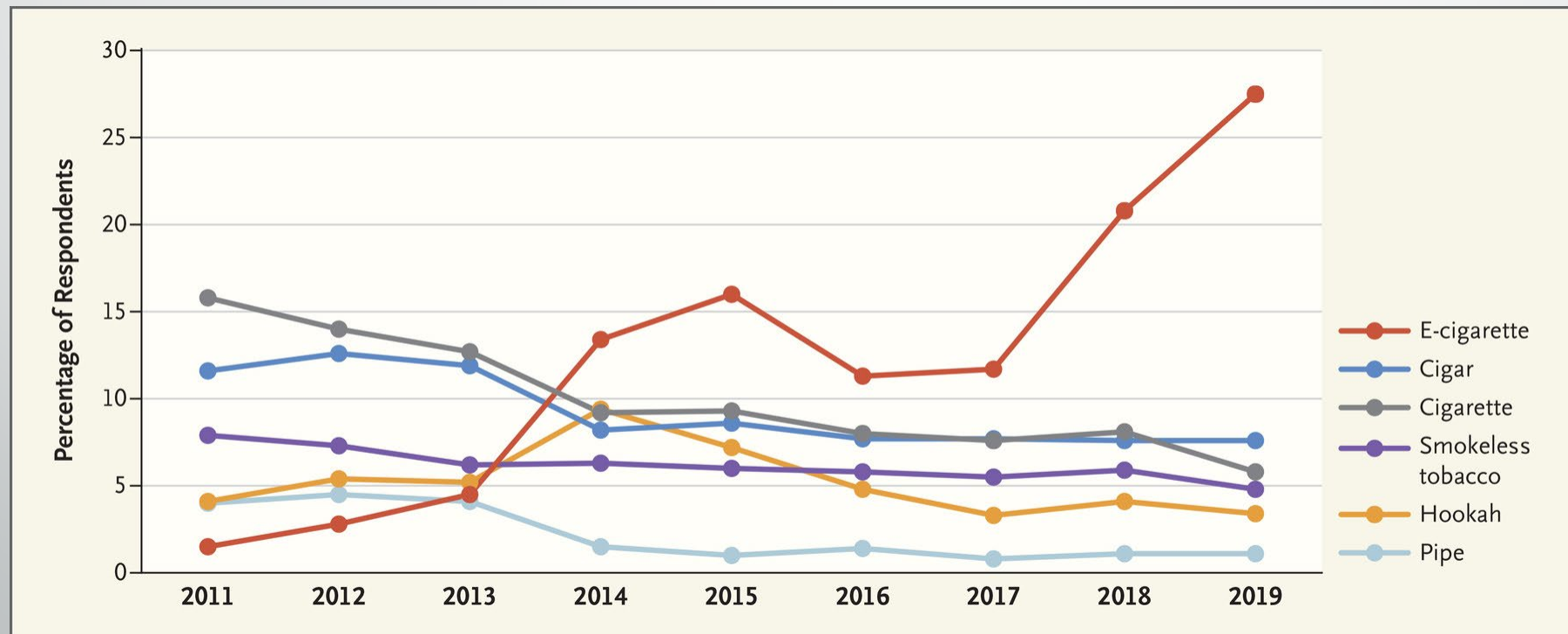
FIGURE 1. Number of patients (N = 2,398) with e-cigarette, or vaping, product use–associated lung injury (EVALI) by week of hospital admission — United States, February 10, 2019–January 14, 2020





The Rise of E-cig Use

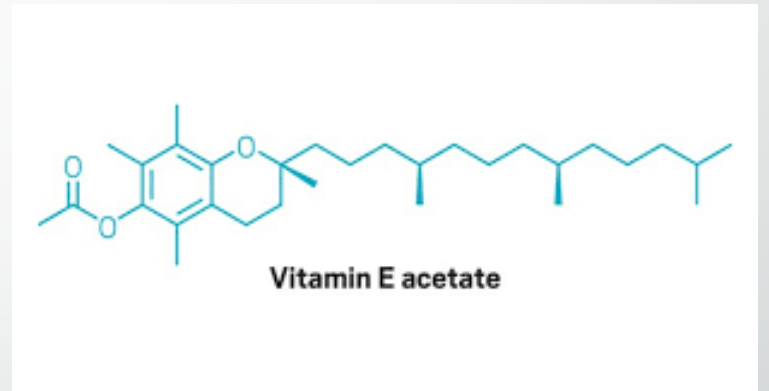
- Current Tobacco Product Use among US HS students, 2011-2019.





Implicated E-cigarette Products

- Vitamin E acetate
 - Found in e-liquids and cartridges in 2019 outbreak
 - Found in BAL samples taken from EVALI patients
 - Used as a diluting agent and filler
- Highly correlated with THC containing products, particularly from "informal sources"





E-cigs and Smoking Cessation

STRATEGIES FOR SMOKING CESSATION			CORE IM
Nicotine Replacement Therapy (NRT)			
LONG ACTING NRT	SHORT ACTING NRTs. Combine with nicotine patch for best effect		
Patch Wear for 24 hours at a time. Alternate sites to minimize skin irritation. Dose: If <10 cig/d, start with 14 mg/d If >10 cig/d, start with 21 mg/d Taper down with a regimen that is easiest for the patient Side Effects: vivid dreams, contact dermatitis	Mini Lozenge Allow to slowly dissolve. Do not chew or swallow lozenge. Dose: 2mg/hr for patients who smoke their first cig >30 mins after awakening 4 mg/hr for patients who smoke their first cig <30 mins after awakening Frequency: Every 1-2 hours. Try not to wait for cravings.	Gum Chew minimally, "park" between teeth and cheek. Rechew when tingling is gone and rotate sites. Avoid use with acidic foods. Dose: 2mg/hr for patients who smoke their 1st cig >30 mins after awakening 4 mg/hr for patients who smoke their 1st cig <30 mins after awakening Frequency: Every 1-2 hours. Try not to wait for cravings. Side Effects: GI irritation when chewed	Nasal Spray Can be used once to each nostril every 1-2 hours. Side Effects: can cause nostril irritation Inhaler Take short puffs but keep air in mouth. Do not inhale.
Non-nicotine Replacement Therapy		Electronic Cigarettes	
Varenicline (Chantix) Nicotinic receptor partial agonist designed to decrease cravings, reduce withdrawal, and dampen nicotine-induced reward pathway. Dose: Take one week before quit date 2.5mg/d x 3d, 2.5mg BID x 4d Then 1mg BID for 3-6 months Side Effects: nausea, vivid dreams	Bupropion (Wellbutrin) Nicotinic receptor antagonist and norepinephrine & dopamine reuptake inhibitor. Designed to reduce cravings and withdrawal. Dose: Take one week before quit date 150mg tablet once daily x 3 days. Then 150mg tablet twice daily for 3-6 months Side Effects: lowers seizure threshold, insomnia, dry mouth	Reserve use until after FDA-approved treatments have failed. Patients should avoid using traditional cigarettes with e-cigs (to minimize adding known harms to unknown harms). Before prescribing e-cigs, discuss a plan for duration of use and when to stop.	

Take Home Points



Immunization update:

PCV-13: Shared decision making for immunocompetent adults ≥ 65



PrEP for HIV:

Descovy is new for PrEP, MSM only
On-Demand PrEP for MSM only



Asthma:

ICS-LABA PRN for Therapy Steps 1+2



E-cigarettes and EVALI:

E-cigs not recommended for smoking cessation
Ingredients causing EVALI are not yet 100% clear

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