
بنام خداوند جان و خرد

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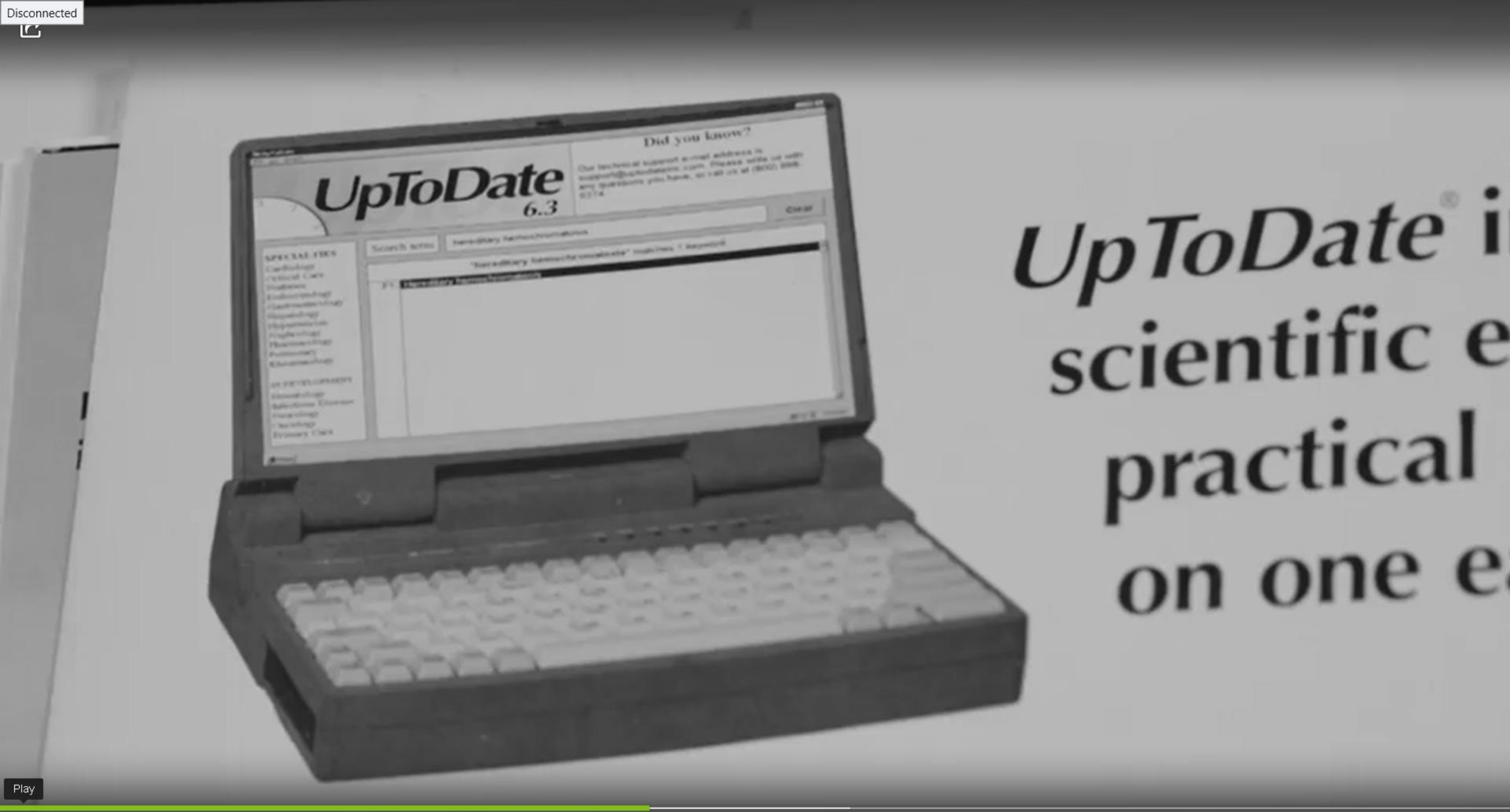

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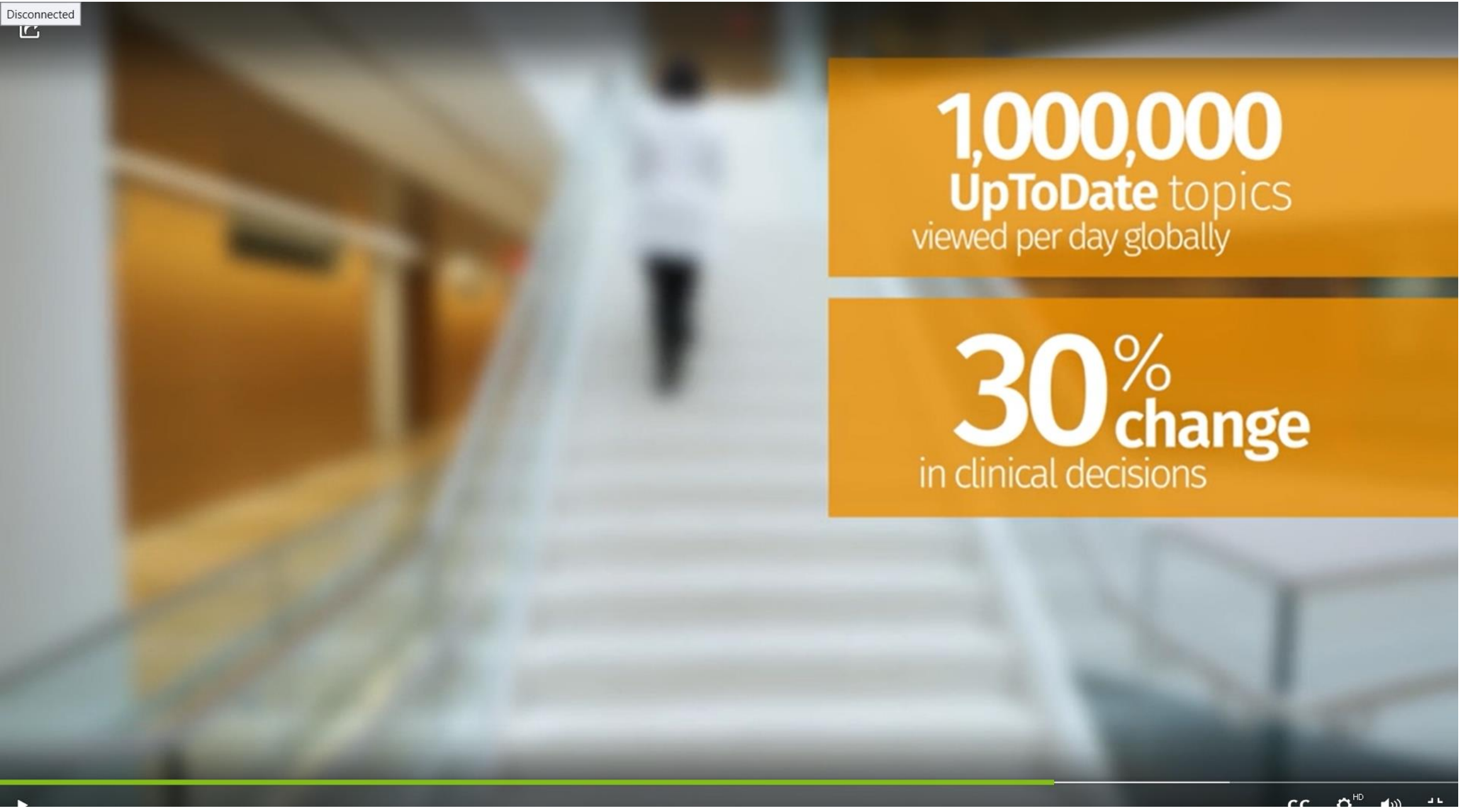
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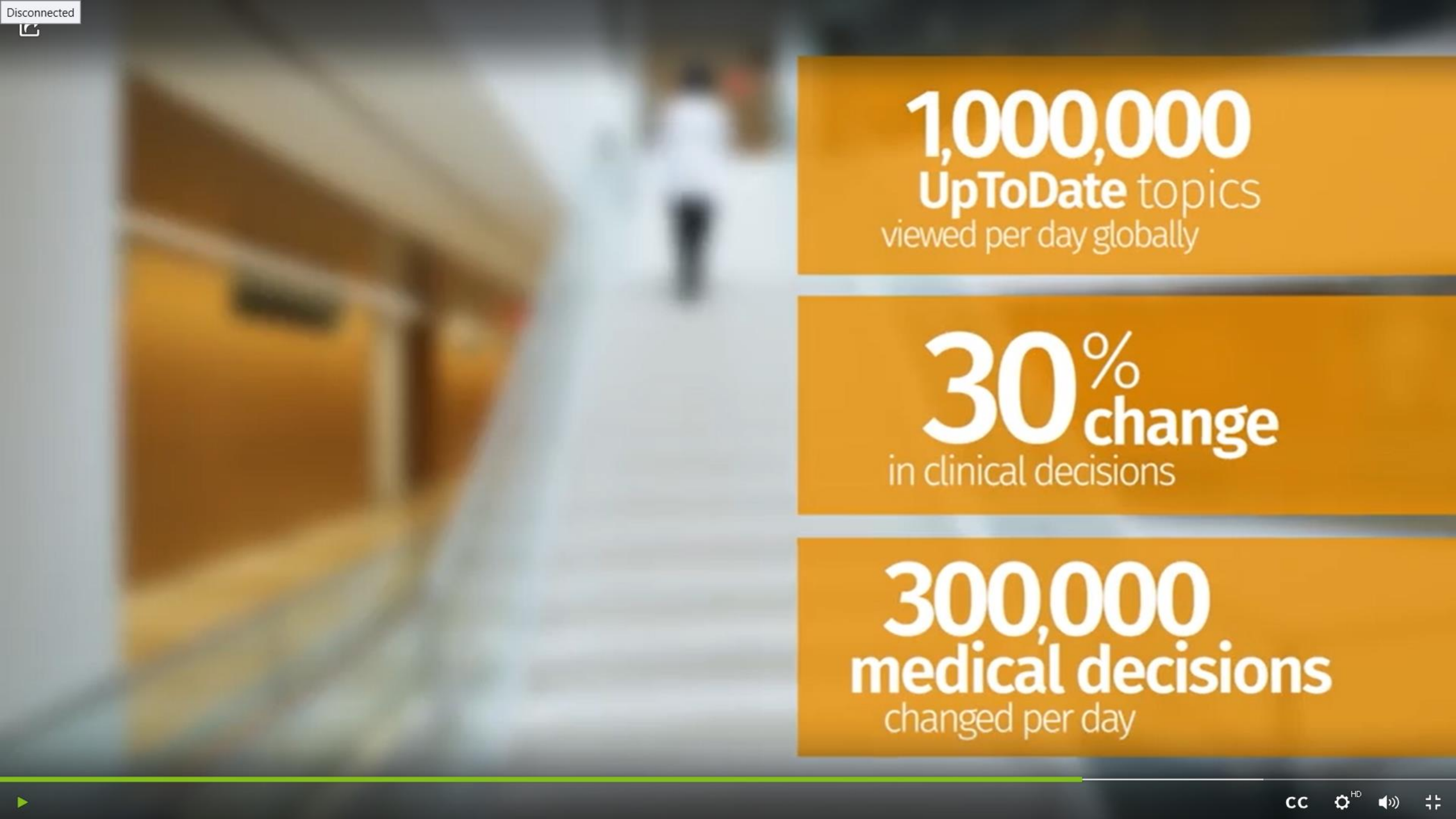

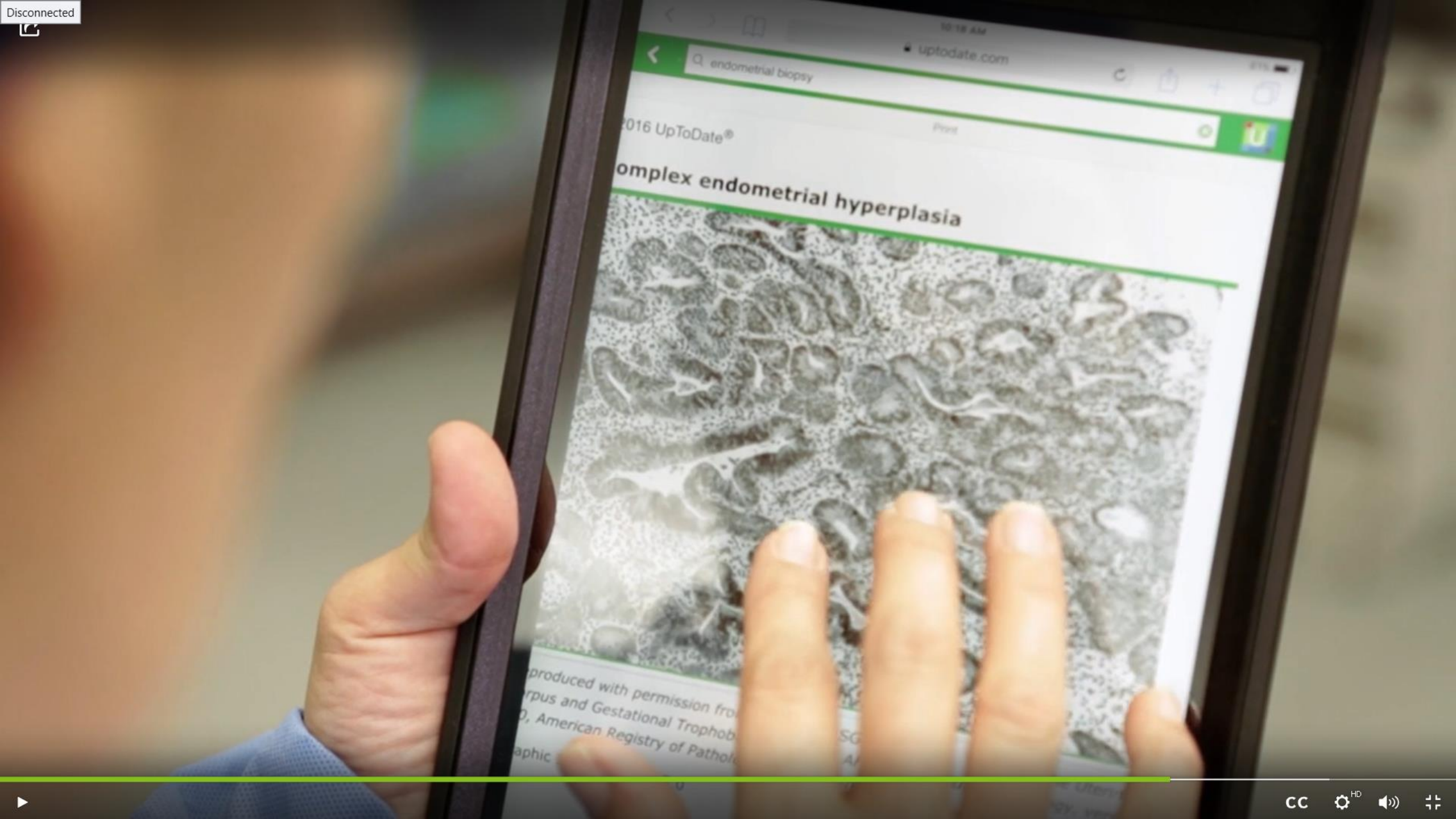
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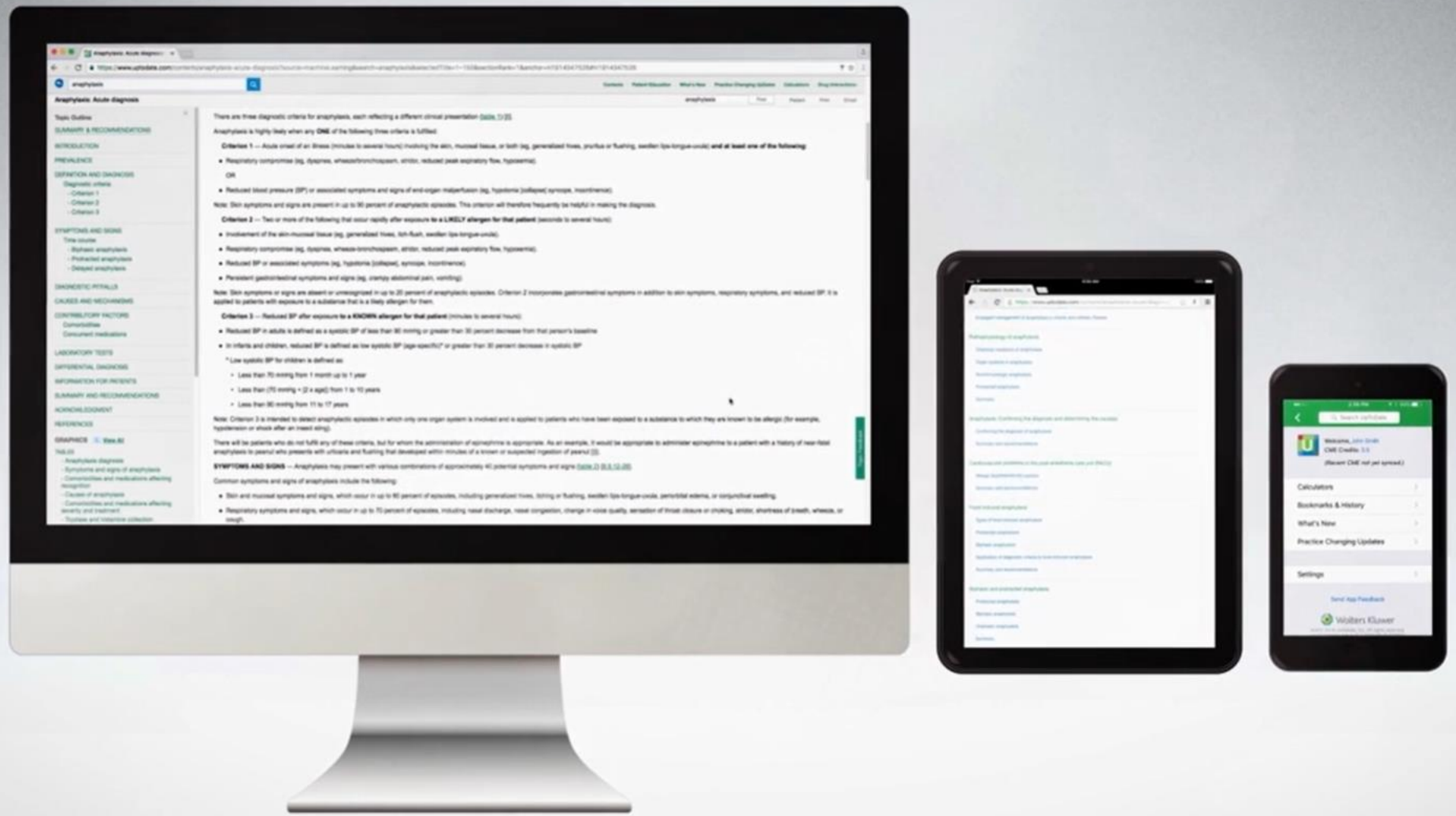

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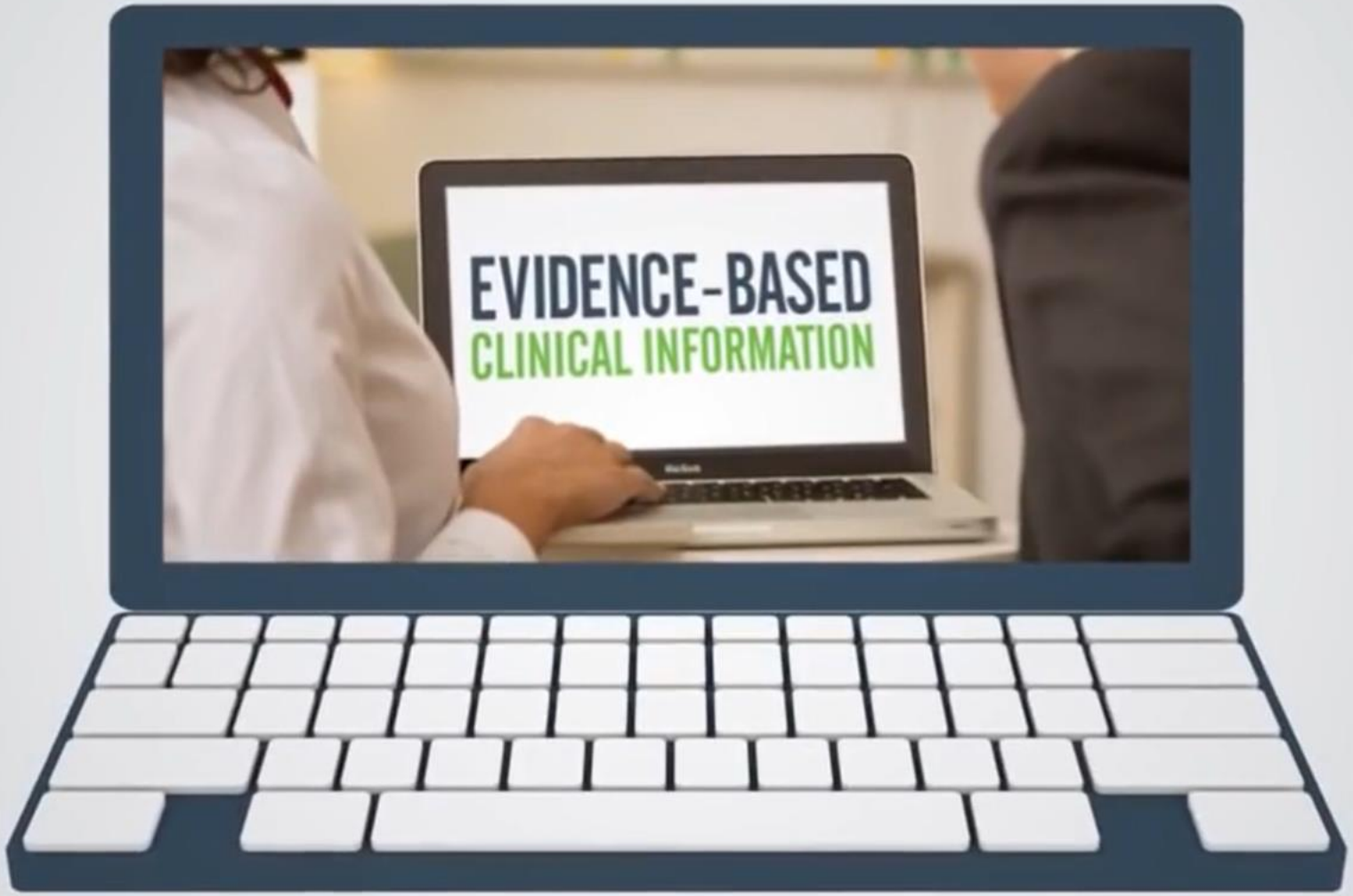

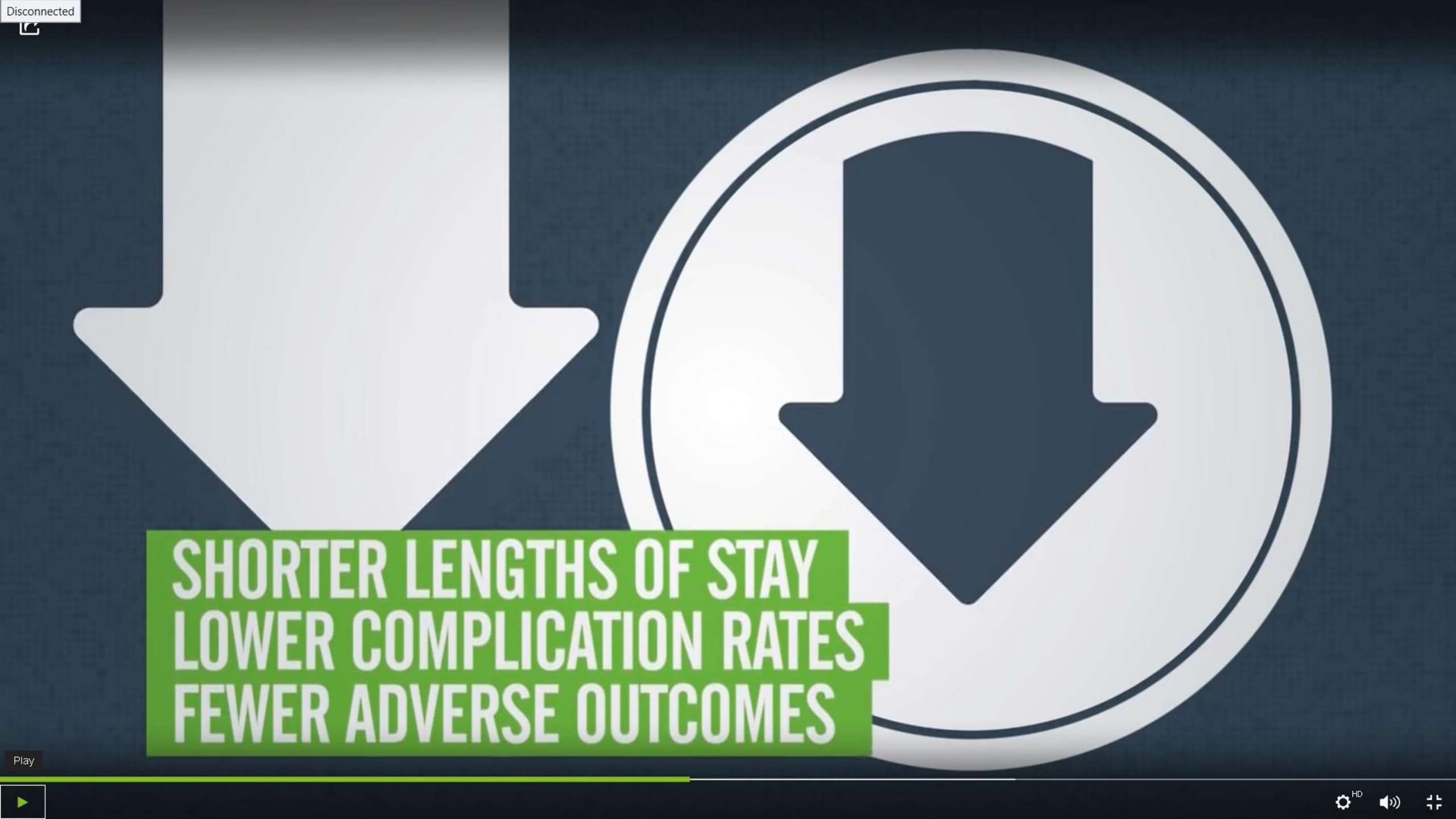
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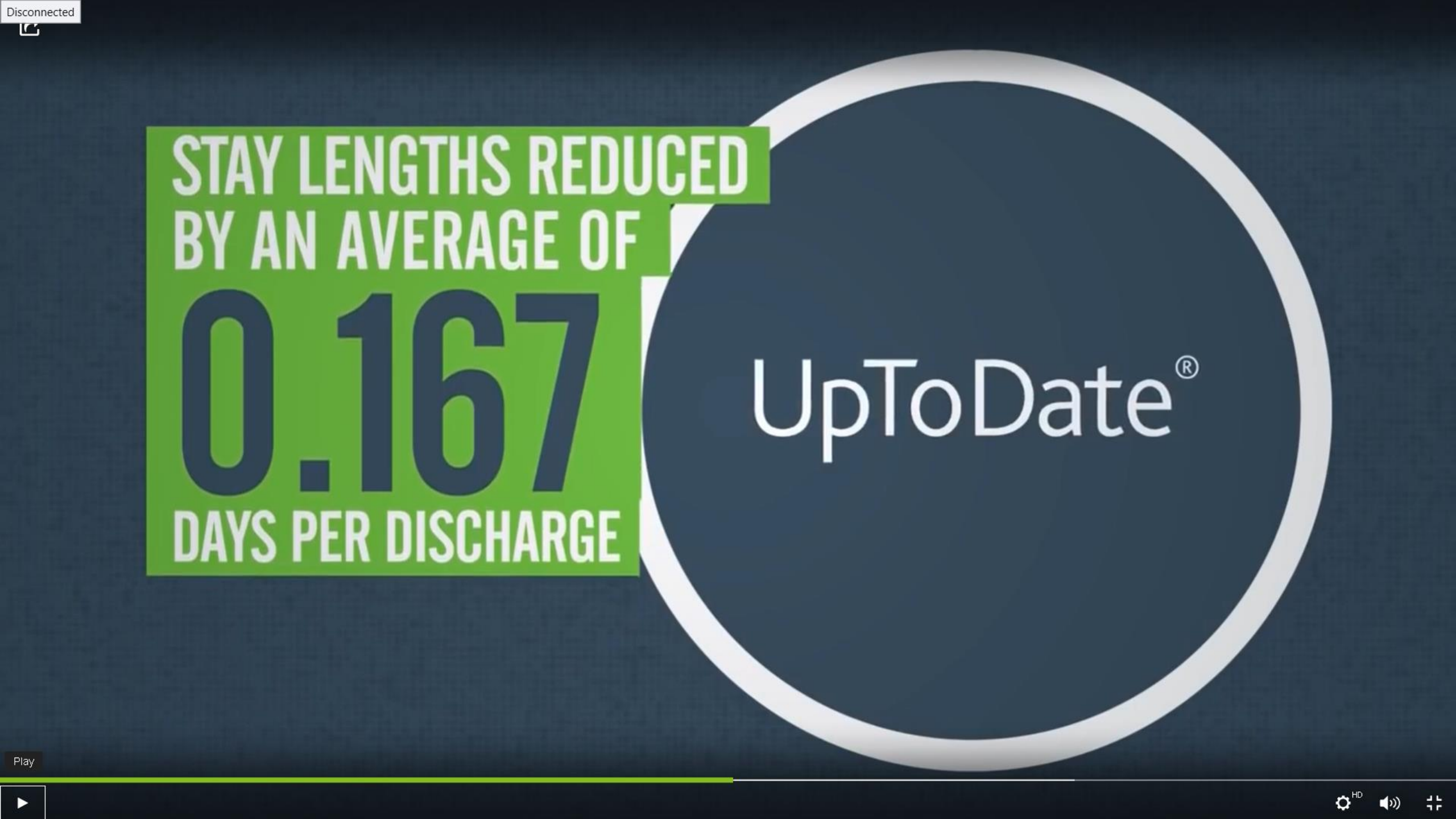
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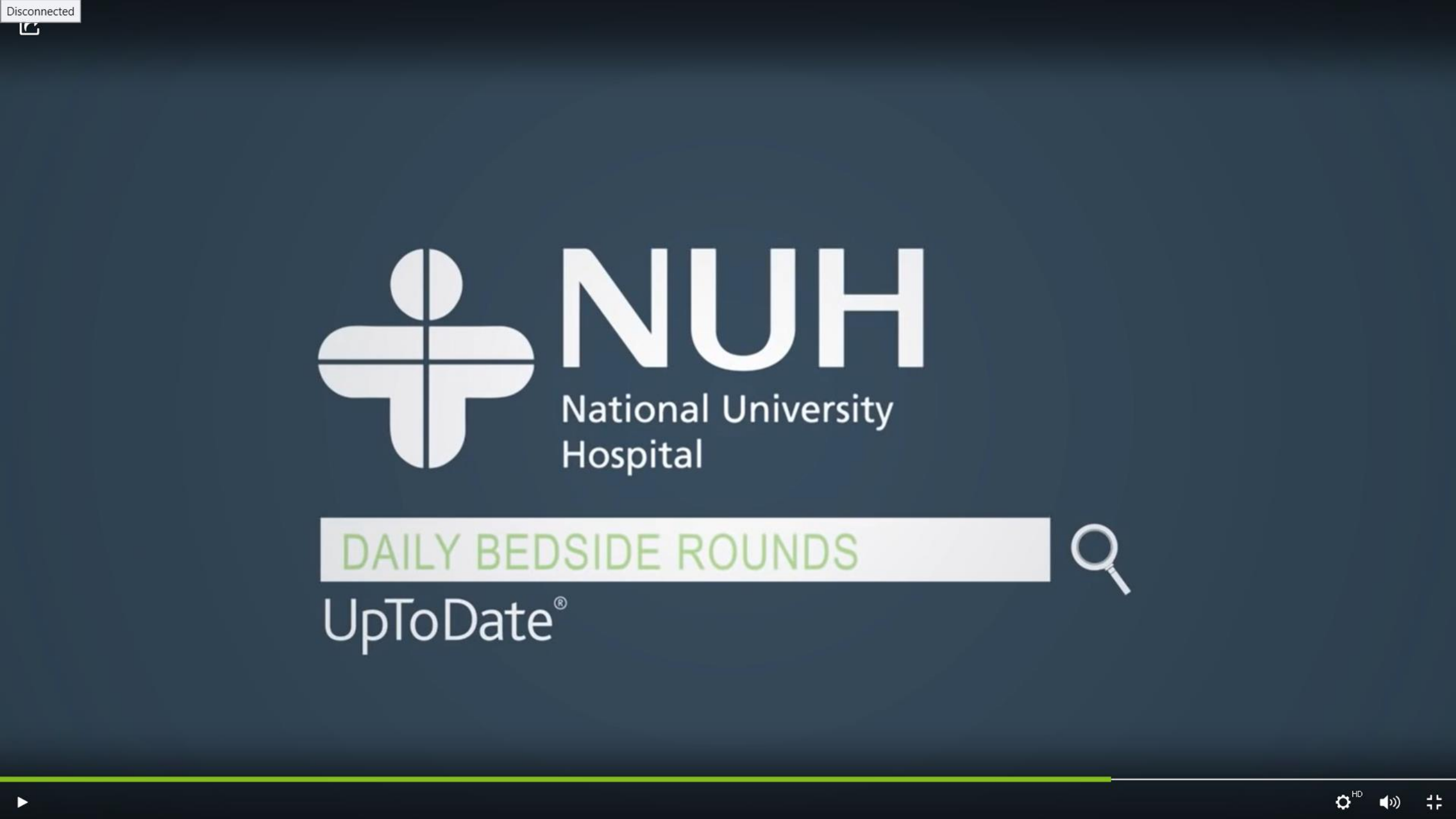


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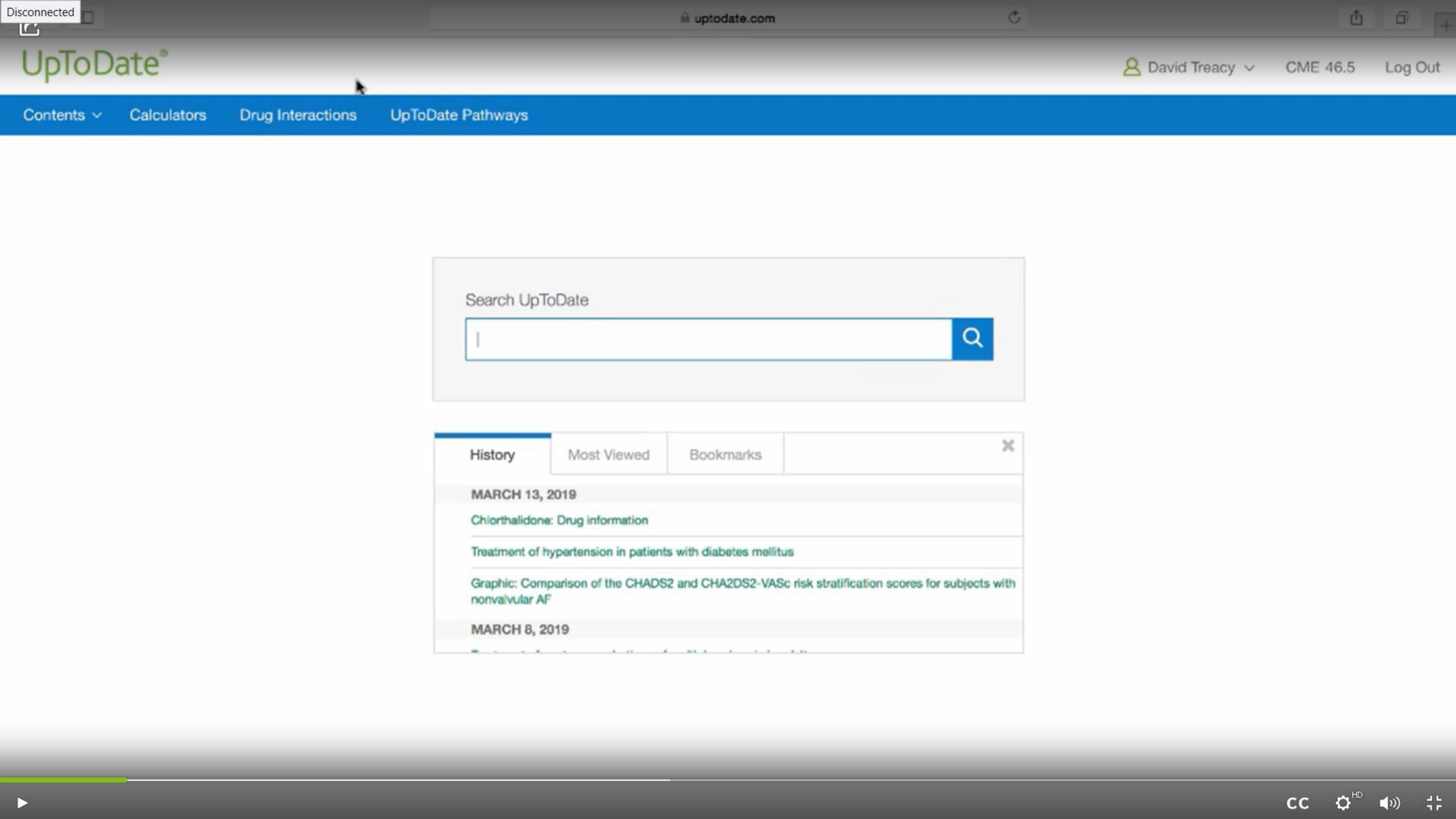
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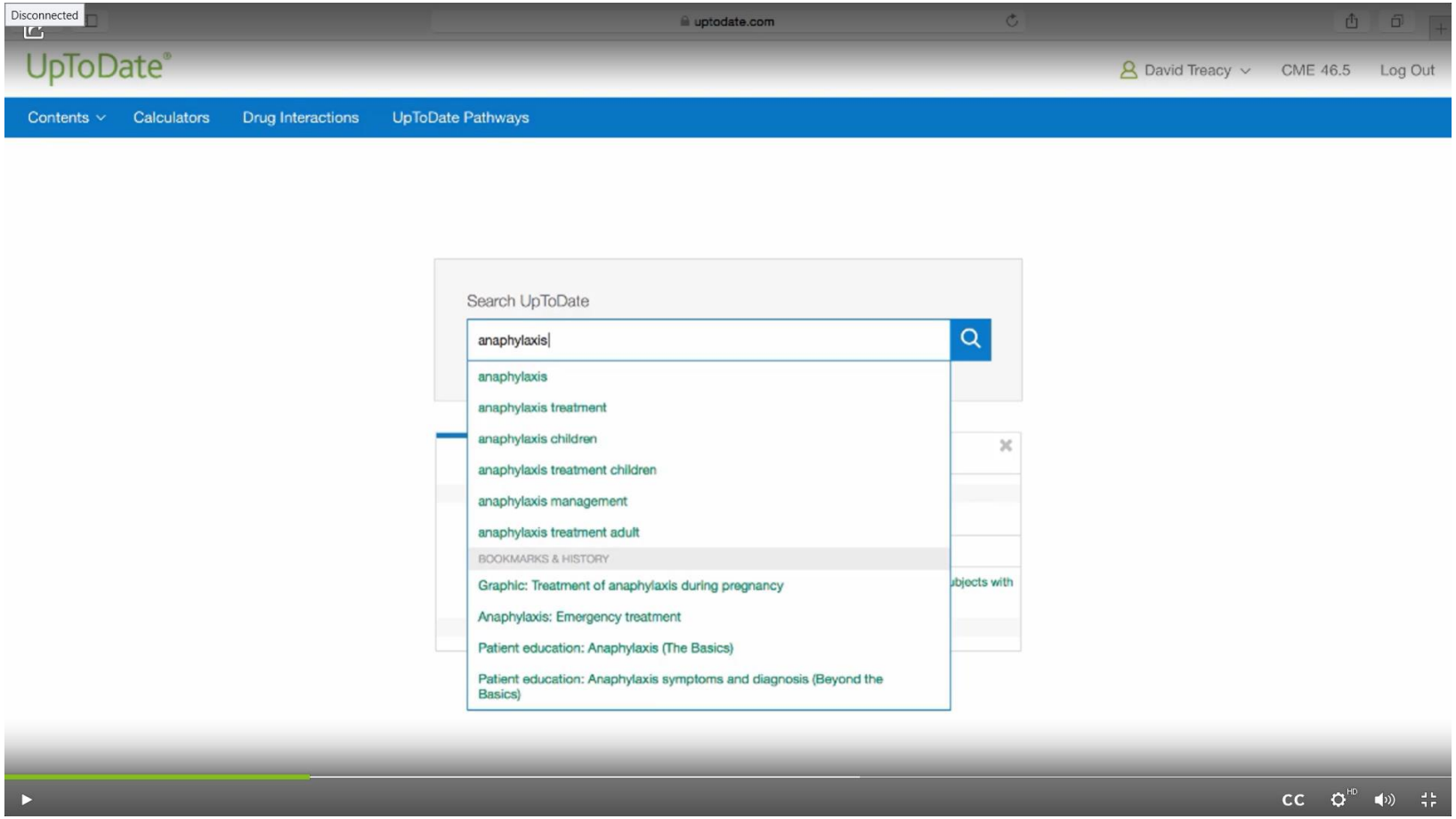
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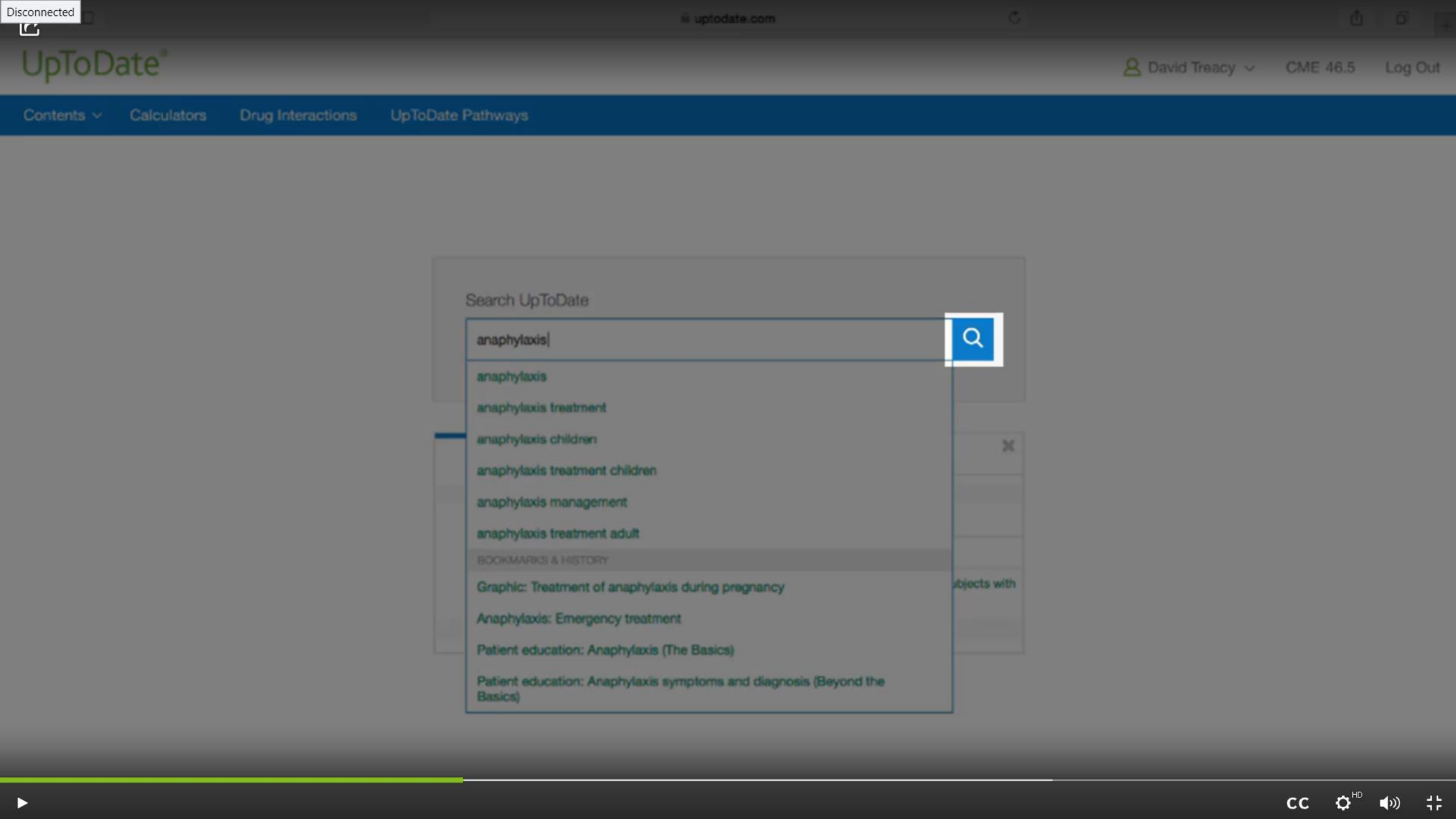
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Anaphylaxis: Acute diagnosis

... outcome from **anaphylaxis** . Other disorders may also increase risk. Persistent asthma is a risk factor for **anaphylaxis** . Asthma is also associated with increased risk of death from **anaphylaxis**, especially ...

- Biphasic anaphylaxis
- Summary and recommendations
- Diagnostic criteria for anaphylaxis (Tables)

Anaphylaxis: Emergency treatment

... This topic will discuss the treatment of **anaphylaxis**. The clinical manifestations and diagnosis of **anaphylaxis**, pathophysiology, and unique features of **anaphylaxis** in specific patient groups are reviewed ...

- Epinephrine
- Summary and recommendations
- Emergency management of anaphylaxis in adults (Tables)
- Emergency management of anaphylaxis in infants and children (Tables)

Pathophysiology of anaphylaxis

...Biphasic **anaphylaxis** occurs in up to one-fifth of **anaphylaxis** cases, and the mechanisms underlying the recurrence of symptoms are unclear. Protracted **anaphylaxis** is defined as an **anaphylactic reaction** that ...

- Chemical mediators of anaphylaxis
- Organ systems in anaphylaxis
- Summary

Anaphylaxis: Confirming the diagnosis and determining the cause(s)

... **Anaphylaxis** is a potentially life-threatening emergency that requires immediate diagnosis and treatment. Patients who have experienced **anaphylaxis** (or suspected **anaphylaxis**) require evaluation to confirm ...

- Confirming the diagnosis of anaphylaxis
- Differential diagnosis of anaphylaxis
- Summary and recommendations

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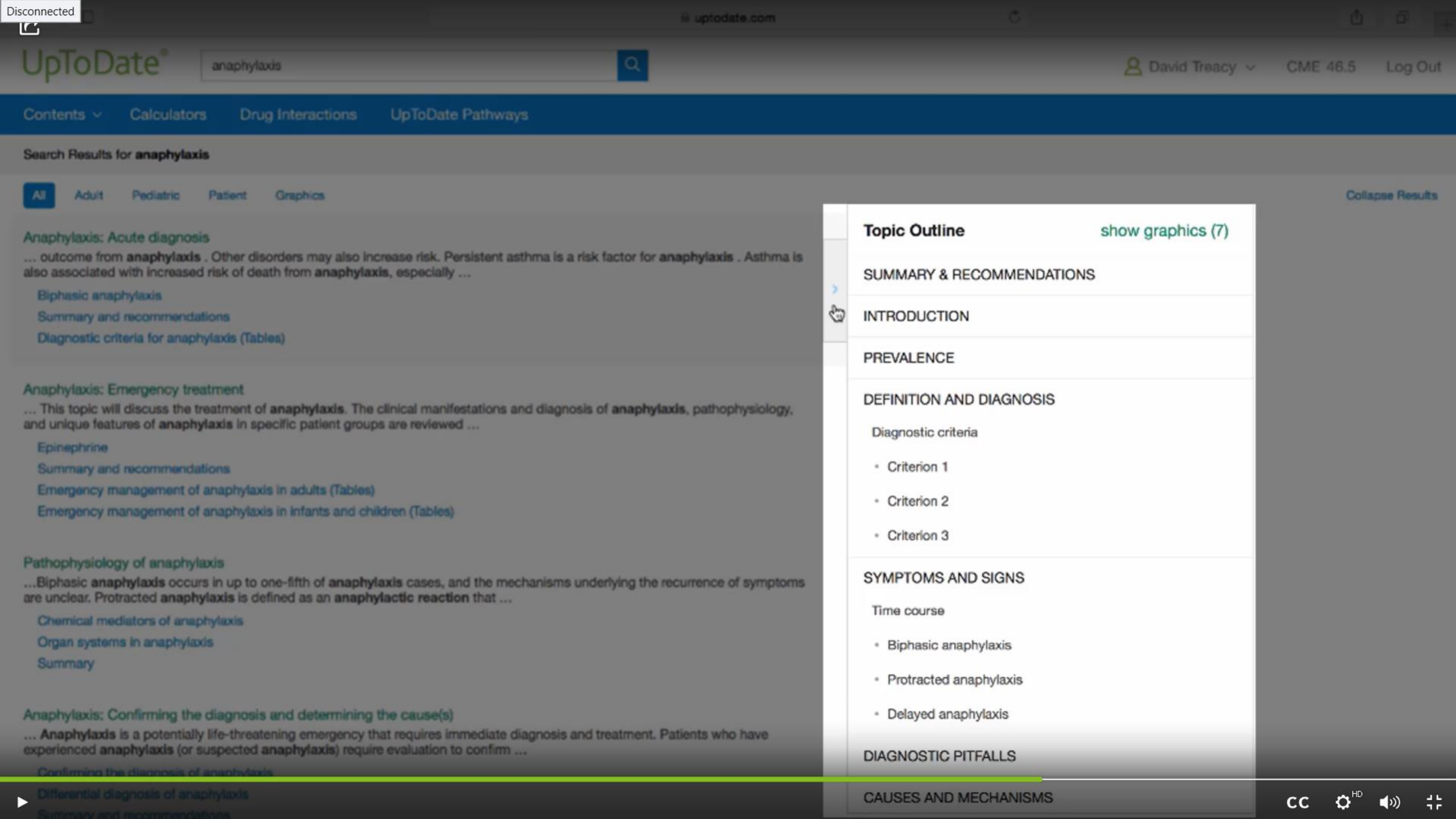
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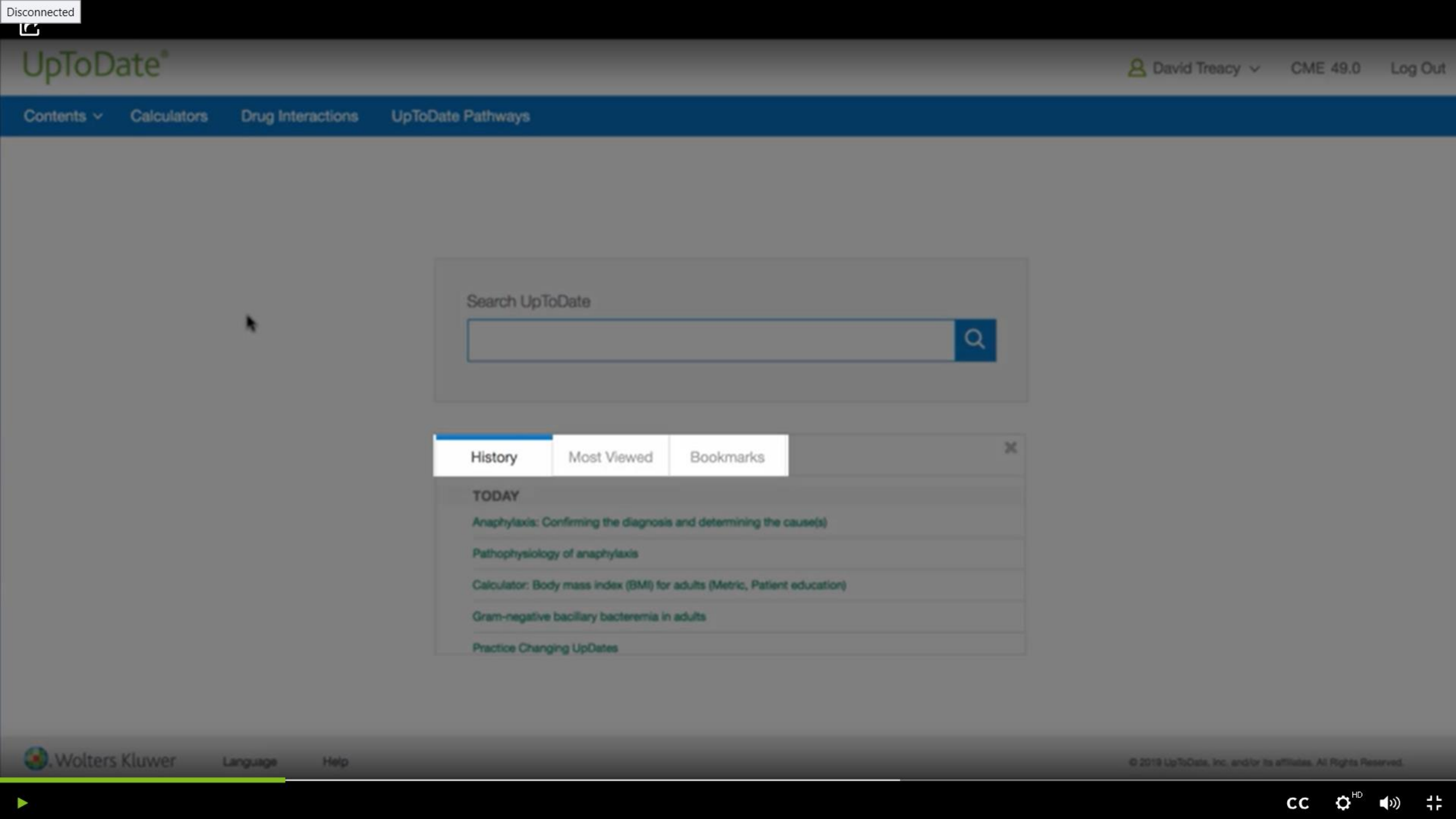

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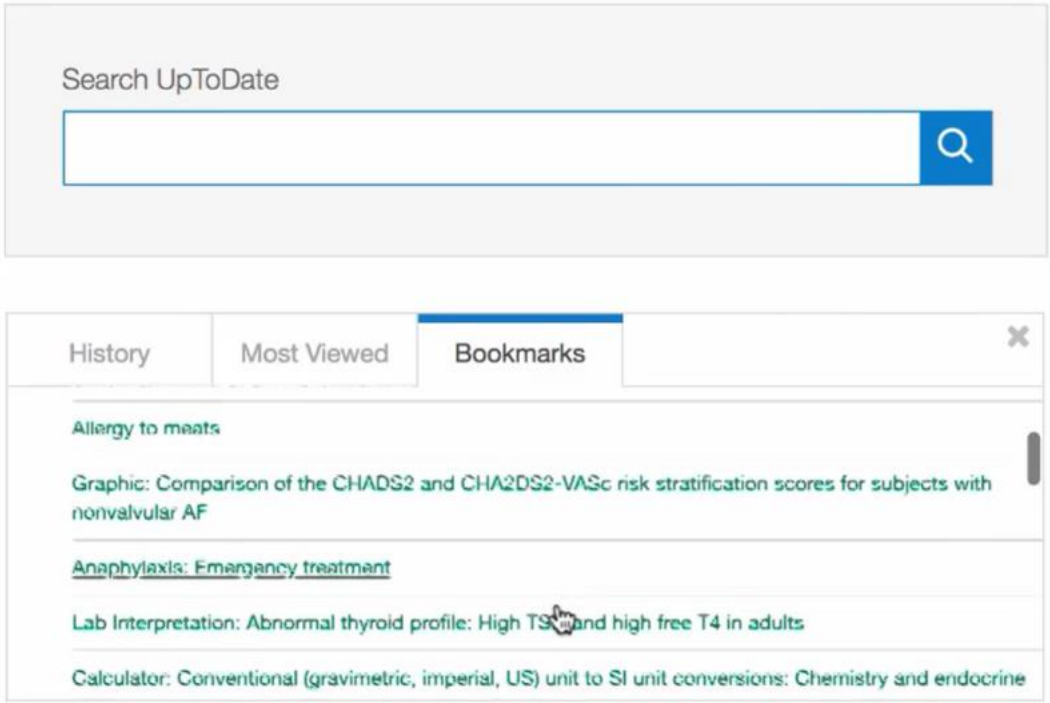

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Evaluation of and initial approach to the adult patient with undifferentiated hypotension and shock

Authors: David F Gaieski, MD, Mark E Mikkelsen, MD, MSCE
Section Editors: Polly E Parsons, MD, Robert S Hockberger, MD, FACEP
Deputy Editor: Geraldine Finlay, MD

Contributor Disclosures

All topics are updated as new evidence becomes available and our peer review process is complete.

Literature review current through: **Feb 2019.** | This topic last updated: **Feb 13, 2019.**

What's New

Bedside ultrasonography in patients with undifferentiated hypotension (September 2018)

Observational evidence supports point-of-care (POC) ultrasonography for the bedside assessment of patients with undifferentiated h…

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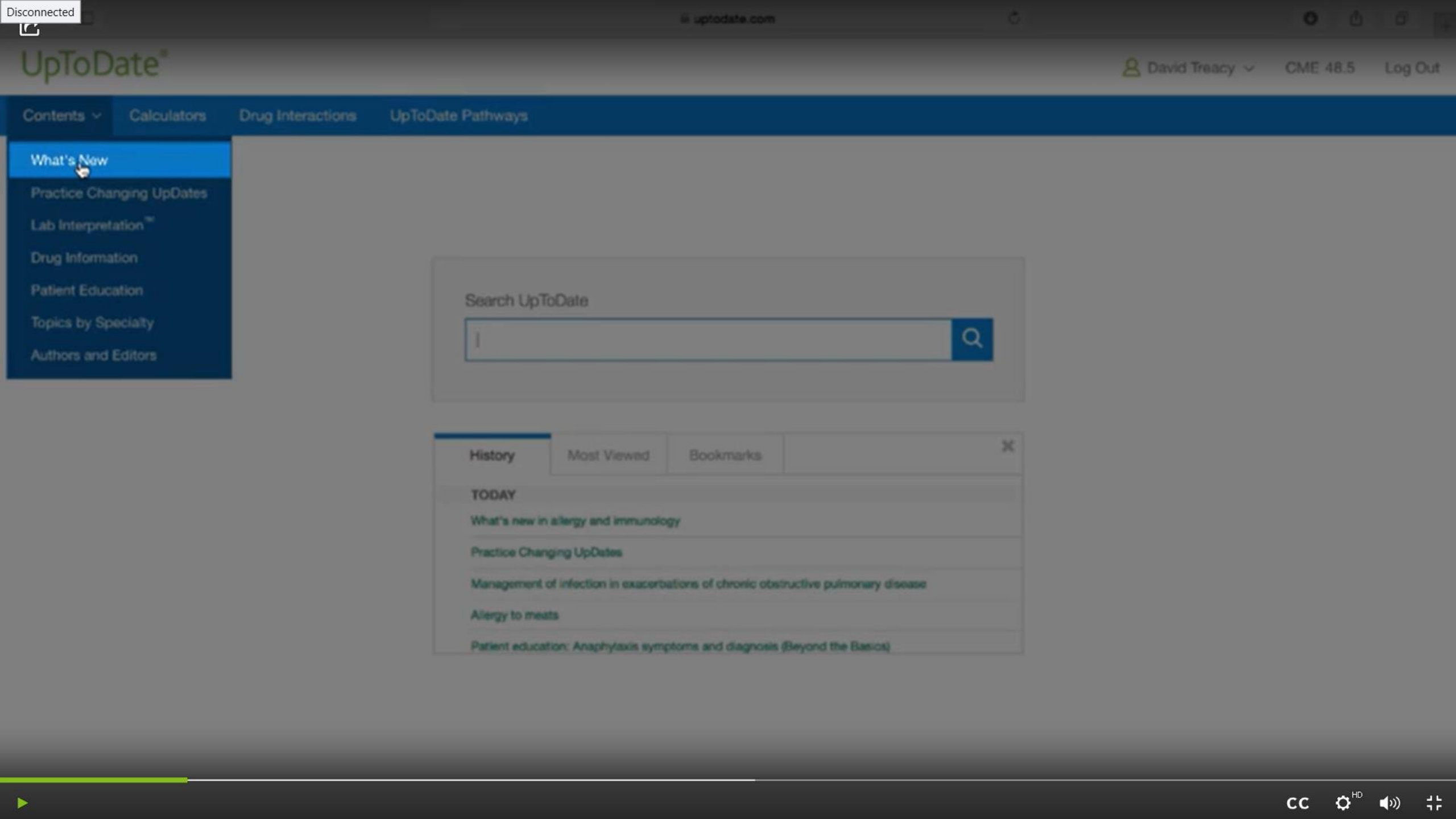
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What's New

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- Sleep medicine
- Sports medicine (primary care)

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Rarity of immediate allergy to local anesthetics (November 2018)

Local anesthetics (LAs) are a rare cause of immediate allergy (reactions occurring within an hour of administration). They more commonly cause a range of non-allergic effects that can mimic aspects of anaphylaxis (eg, flushing, tachycardia, paresthesias). In a retrospective series, over 400 patients with anaphylaxis-like reactions to LAs were evaluated with skin testing and readministration of the implicated LA [3]. Just 0.5 percent had true immediate allergy to an LA, and an additional 7 percent were diagnosed with spontaneous urticaria or allergy to other agents, including pain medications, antibiotics, and latex. Most reactions were classified as psychosomatic, vasovagal, or related to the pharmacologic effects of the LA or epinephrine. Patients with suspected allergic reactions to LAs should be referred to an allergist for evaluation, as most do not have true allergy to LAs. (See "Allergic reactions to local anesthetics", section on 'Prevalence'.)

Mechanisms of sugammadex hypersensitivity (October 2018)

Sugammadex is a reversal agent that rapidly inactivates steroidal neuromuscular blocking agents after the completion of surgery. However, it has been implicated as a cause of perioperative anaphylaxis, with several reports of patients with positive skin testing, consistent with an IgE-mediated mechanism. In a randomized trial of 448 volunteers exposed to three doses of sugammadex, without prior administration of a neuromuscular blocking agent, hypersensitivity reactions developed in eight subjects, appeared to be dose-dependent, and did not necessarily recur with repeat exposure [4]. Laboratory testing did not find evidence of drug-specific IgE or IgG, direct mast cell activation, or complement activation, and skin testing was positive in just one patient. Thus, the mechanisms of these reactions are not clear and require further study. (See "Perioperative anaphylaxis: Evaluation and prevention of recurrent reactions", section on 'Sugammadex'.)

FOOD ALLERGY AND INTOLERANCE

Wheat oral immunotherapy (March 2019)

Several small pilot studies of wheat oral immunotherapy (OIT) in children with wheat allergy have reported variable success with desensitization and problems with adherence. One potential hurdle that may affect adherence to wheat OIT compared with OIT to other common food allergens is the larger volume that patients must consume due to the relatively lower amount of protein in wheat. A randomized

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Prevalence — Immediate hypersensitivity reactions to LAs are extremely rare. Evidence for their existence consists of a small number of case reports in which patients had reactions that were consistent with immediate hypersensitivity, and positive skin tests were demonstrated [39-49].

The rarity of immediate hypersensitivity to LAs was demonstrated by two large series:

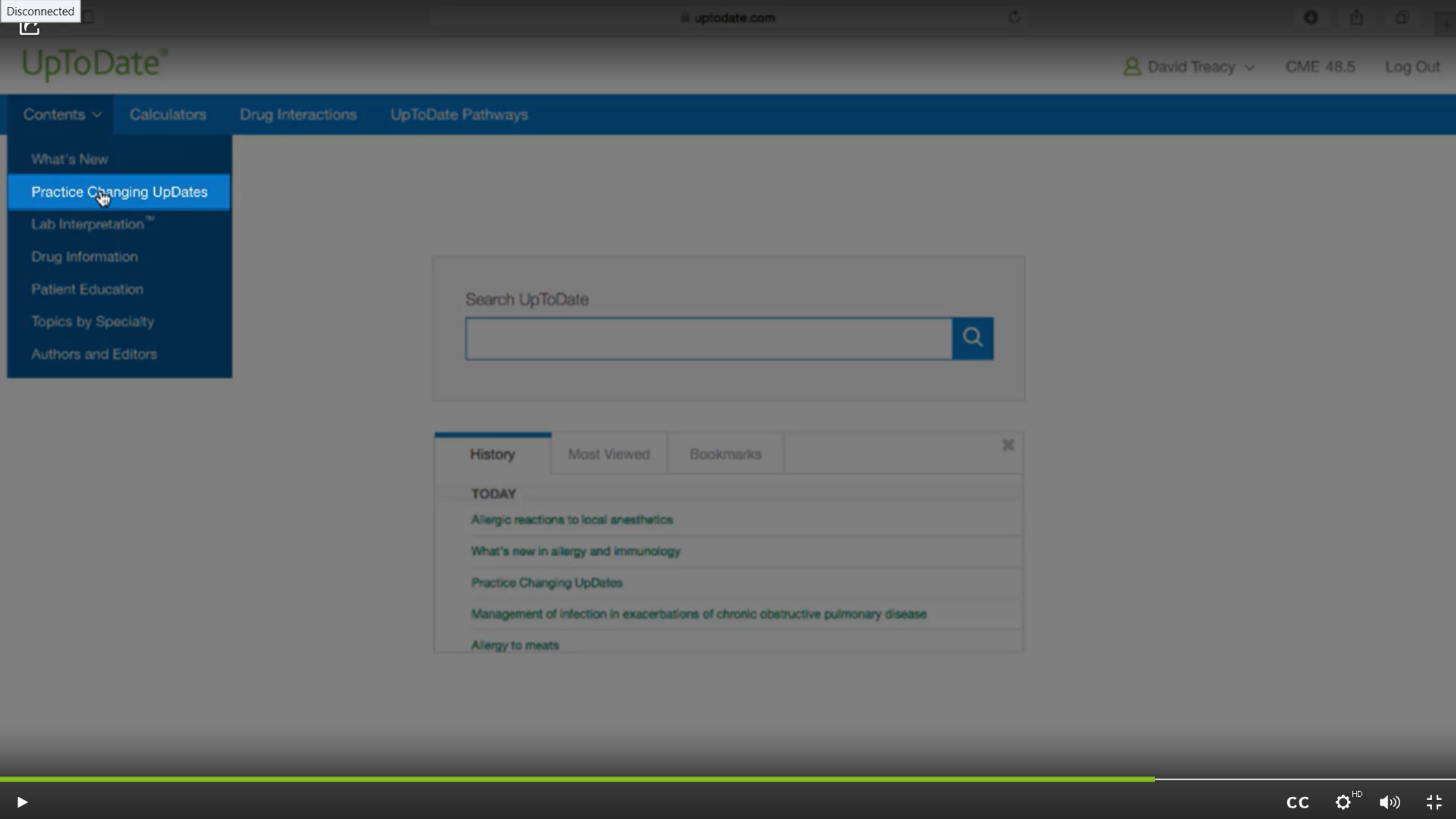
- One series included 162 patients who were evaluated over 10 years in the Danish Anaesthesia Allergy Center for suspected allergy associated with anesthesia and surgery [50]. No instances of true immediate hypersensitivity were identified. Skin testing to LAs was performed in all patients, and subcutaneous provocation (challenge) was performed regardless of skin testing results. In total, 162 patients underwent 203 provocations to various LAs, all of which were negative. Other culprit agents that were implicated included chlorhexidine, cefuroxime, and patent blue dye.

- A second series described 402 patients evaluated over 20 years in a German allergy clinic for reactions to LAs occurring within 30 minutes of injection [51]. Most occurred during outpatient dental or surgical procedures. Two patients (0.5 percent) were found to have true immediate allergy and positive intradermal skin tests to LAs. Acute urticaria (with or without angioedema) was the presenting symptom in 29 patients, of whom 14 were determined to have spontaneous urticaria, and 13 had reactions to other agents, including nonsteroidal anti-inflammatory drugs (NSAIDs), atracurium, cephalosporins, latex, gelatin, and dipyrone. All of these 27 patients had negative LA skin tests and nonreactive subcutaneous challenges, indicating the very high negative predictive value of skin testing.

Clinical manifestations — Clinical manifestations of immediate allergic reactions to LAs include pruritus, urticaria, bronchospasm, angioedema, laryngeal edema, and/or anaphylaxis, typically occurring **within one hour** of administration (table 3) [39,40,42-49]. Contact urticaria to topical creams containing LAs (eg, lidocaine, prilocaine, and castor oil; Emla cream [brand name]) has also been reported [41].

Case reports describe patients with reactions to mepivacaine and lidocaine [39], articaine [40], lidocaine [42-45], levobupivacaine and ropivacaine [46], mepivacaine, lidocaine, and bupivacaine [47], and epidural lidocaine and chloroprocaine [48]. Drug-specific IgE has been demonstrated in vitro in just one report (to mepivacaine) [52].

Evaluation — Evaluation of a patient with a possible immediate allergic reaction following administration of an LA involves a detailed histor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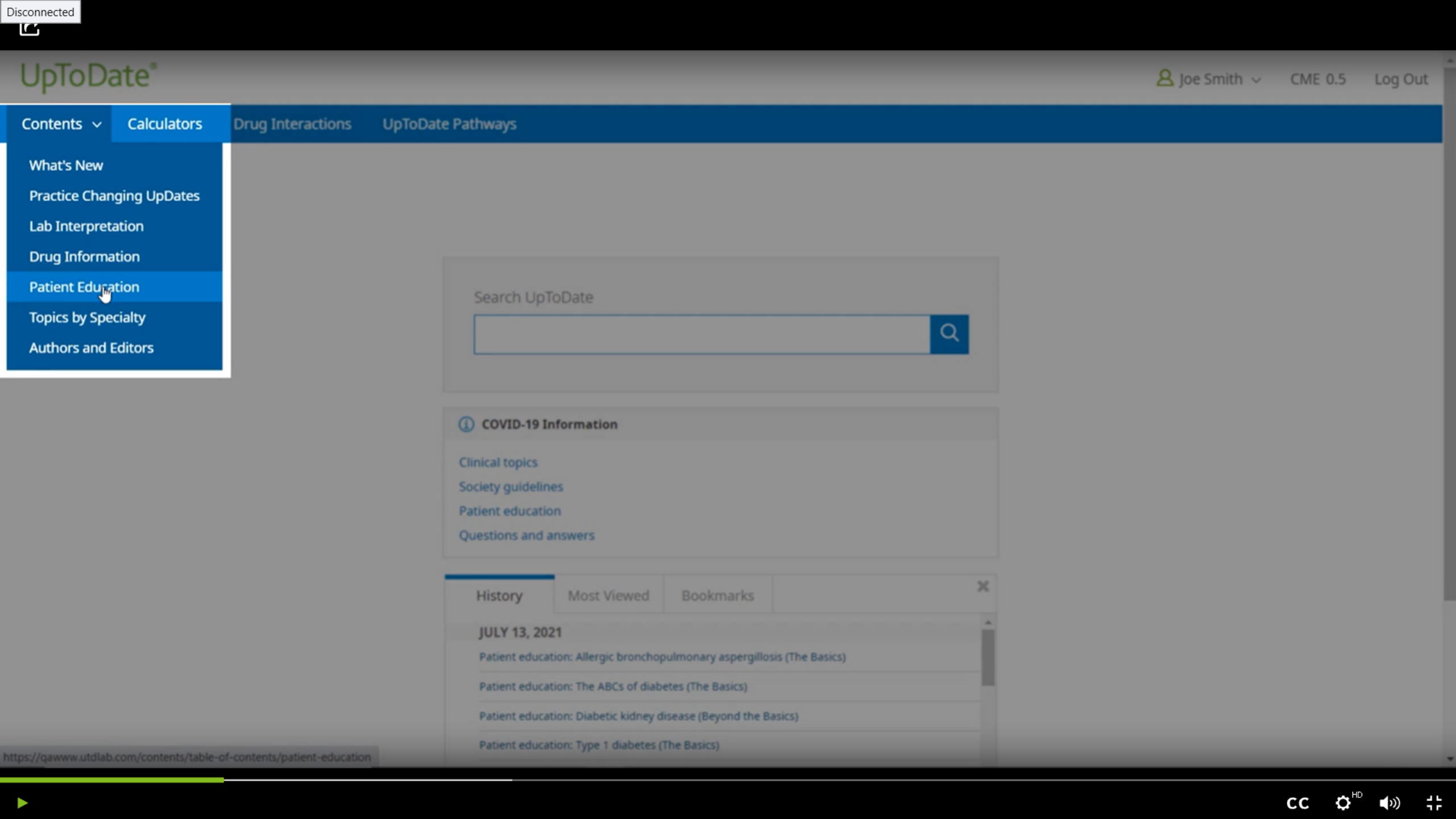

Clinical presentation, diagnosis, and initial evaluation of diabetes mellitus in adults

Authors: Silvio E Inzucchi, MD, Beatrice Lupsa, MD
Section Editors: David M Nathan, MD, Joseph I Wolfsdorf, MD, BCh
Deputy Editor: Jean E Mulder, MD

Contributor Disclosures

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INTRODUCTION

The term diabetes mellitus describes diseases of abnormal carbohydrate metabolism that are characterized by hyperglycemia. It is associated with a relative or absolute impairment in insulin secretion, along with varying degrees of peripheral resistance to the action of insulin. Every few years, the diabetes community reevaluates the current recommendations for the classification, diagnosis, and screening of diabetes, reflecting new information from research and clinical practice.

This topic will review the clinical presentation, diagnosis, and initial evaluation of diabetes in nonpregnant adults. Screening for and prevention of diabetes, the etiologic classification of diabetes mellitus, the treatment of diabetes, as well as diabetes during pregnancy are discussed separately.

- (See "Screening for type 2 diabetes mellitus".)
- (See "Prevention of type 2 diabetes mellitus" and "Prevention of type 1 diabetes mellitus".)
- (See "Classification of diabetes mellitus and genetic diabetic syndromes".)
- (See "Initial management of hyperglycemia in adults with type 2 diabetes mellitus".)

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[by method of administration]

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Epinephrine (adrenaline) (oral inhalation): Drug information

Epinephrine (adrenaline) (systemic): Drug information

Epinephrine (adrenaline): Drug information Lexicomp®

Information for this drug is presented separately based upon the following methods of administration:

- Epinephrine (adrenaline) (nasal): Drug information
- Epinephrine (adrenaline) (oral inhalation): Drug information
- Epinephrine (adrenaline) (systemic): Drug information

Topic 9409 Version 45.0

Topic Feedback

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Epinephrine (adrenaline) (systemic): Drug information Lexicomp®

(For additional information see "Epinephrine (adrenaline) (systemic): Patient drug information" and see "Epinephrine (adrenaline) (systemic): Pediatric drug information")

For abbreviations and symbols that may be used in Lexicomp (show table)

Special Alerts

Pfizer Extended Expiration Dates for Emergency Syringe Shortages - updated February 2019

The FDA has alerted health care providers of extended expiration dates for certain injectable drug products manufactured by Hospira (a Pfizer company) which may be used beyond the labeled expiration dates to assist with the ongoing critical shortages of injectable drugs used in critical care. Select lot numbers of atropine sulfate injection, dextrose 50%, epinephrine injection, and sodium bicarbonate are eligible for use beyond the labeled expiration date if they have been and will continue to be stored according to the labeled conditions.

Further information, including specific products, lot numbers, and extended expiration dates, may be found at https://www.fda.gov/Drugs/DrugSafety/DrugShortages/ucm563360.htm.

Epinephrine Autoinjector Extended Expiration Dates August 2018

The FDA has extended the expiration date of specific lots of 0.3 mg products marketed by Mylan by 4 months beyond the labeled expiration date. This change beyond the approved 20-month shelf life is based on stability data provided by Mylan and reviewed by the FDA. To help ensure patient safety, these products should continue to be stored as labeled.

More information is available at https://www.fda.gov/NewsEvents/Newsroom/FDAInBrief/ucm617724.htm.

Brand Names: US

Adrenaclick [DSC]; Adrenalin; Adyphren; Adyphren Amp; Adyphren Amp II; Adyphren II; Auvi-Q; EpinephrineSnap-EMS; Epinephrinesnap-v; EpiPen 2-Pak; EpiPen Jr 2-Pak; EPIsnap; EPY II [DSC]; EPY [DSC]; Symjepi

Brand Names: Canada

- Adrenalin Chloride
- Allerject
- Anapen
- Anapen Junior
- EpiPen
- [illegible]
- TARO-Epinephrine

Dosing: Adult

Note: Adrenaclick has been discontinued in the US for more than 1 year.

Note: As of May 1, 2016, ratio expressions of epinephrine concentrations are prohibited on drug labels. Ampules, vials, and syringes of epinephrine with ratio expressions may, however, remain in inventory until replaced by products with revised labeling. Therefore, the ratio expression of 1:1,000 is equivalent to 1 mg/mL and 1:10,000 is equivalent to 0.1 mg/mL (ISMP 2015).

Acute severe asthma unresponsive to inhaled beta-agonist (off-label use): IM, SubQ: 0.01 mg/kg divided into 3 doses of approximately 0.3 to 0.5 mg every 20 minutes; the **1 mg/mL** concentration is recommended (AHA [Vanden Hoek 2010]; Cydulka 2016; Shah 2012).

Asystole/pulseless arrest, pulseless VT/VF (ACLS [Neumar 2010]):

IV, Intraosseous: 1 mg every 3 to 5 minutes until return of spontaneous circulation; if this approach fails, higher doses of epinephrine (up to 0.2 mg/kg) have been used for treatment of specific problems (eg, beta-blocker or calcium channel blocker overdose)

Note: High IV dose epinephrine (ie, >1 mg per dose) has not been shown to improve survival or neurological outcomes as compared to standard dose epinephrine and is not recommended (ACLS [Neumar 2010]; ACLS [Neumar 2015]).

Endotracheal: 2 to 2.5 mg every 3 to 5 minutes until IV/intraosseous access established or return of spontaneous circulation; dilute in 5 to 10 mL NS or sterile water. **Note:** Absorption may be greater with sterile water (Naganobu 2000). May cause false-negative reading with exhaled CO_2 detectors; use second method to confirm tube placement if CO_2 is not detected (ACLS [Neumar 2010]).

Bradycardia (symptomatic; unresponsive to atropine or pacing): *IV infusion*: 2 to 10 mcg/minute **or** 0.1 to 0.5 mcg/kg/minute (7 to 35 mcg/minute in a 70 kg patient); titrate to desired effect (ACLS [Neumar 2010]; AHA [Peberdy 2010]).

Hypersensitivity reaction (eg, anaphylaxis): Note: SubQ administration results in slower absorption and is less reliable. IM administration in the anterolateral aspect of the middle third of the thigh is preferred in the setting of anaphylaxis (AHA [Vanden Hoek 2010]; WAO [Kemp 2008]).

IM (preferred), SubQ: 0.2 to 0.5 mg using the **1 mg/mL** solution every 5 to 15 minutes in the absence of clinical improvement (AAAAI [Lieberman 2015]; AHA [Vanden Hoek 2010]; WAO [Kemp 2008]).

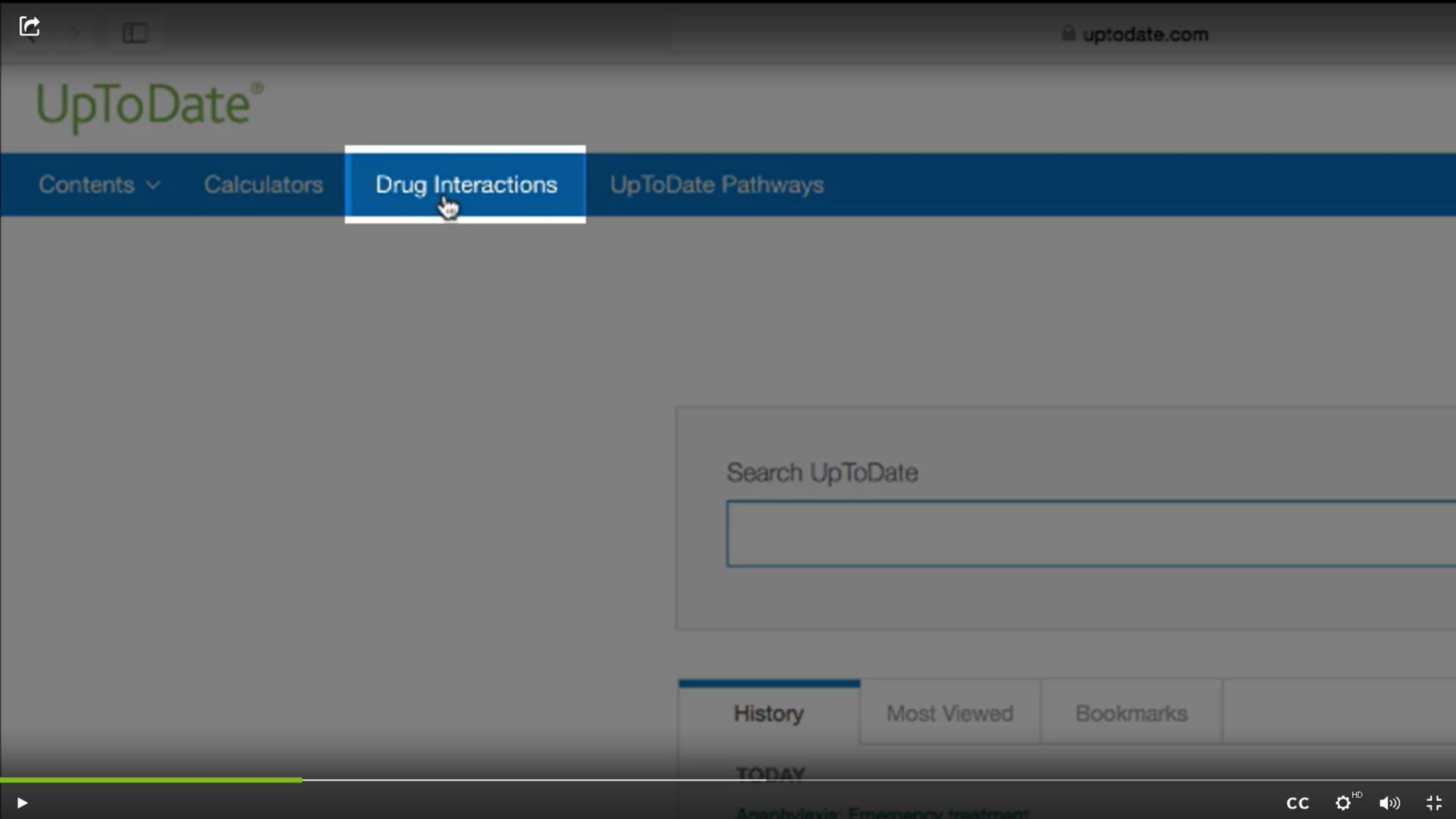
IV:

Slow IV bolus: 0.1 mg using the **0.1 mg/mL** solution (further diluted in 10 mL of NS) administered over 5 to 10 minutes (Barach 1984)

Continuous infusion: May initiate with an infusion at 2 to 15 mcg/minute (with crystalloid administration) (AAAAI [Lieberman 2015]; AHA [Vanden Hoek 2010]; Brown 2004).

Note: In general, IV administration should only be done in patients who are unresponsive or profoundly hypotensive who have failed to respond to IV fluid replacement and several epinephrine injections (WAO [Kemp 2008]). If the patient is in cardiopulmonary arrest, use of higher IV/IO push doses (ie, 1 mg every 3 to 5 minutes) should be employed or appropriate endotracheal doses

Self-administration following severe allergic reactions (eg, insect stings, food): **Note:** The World Health Organization (WHO) and Anaphylaxis Canada recommend the availability of one dose for every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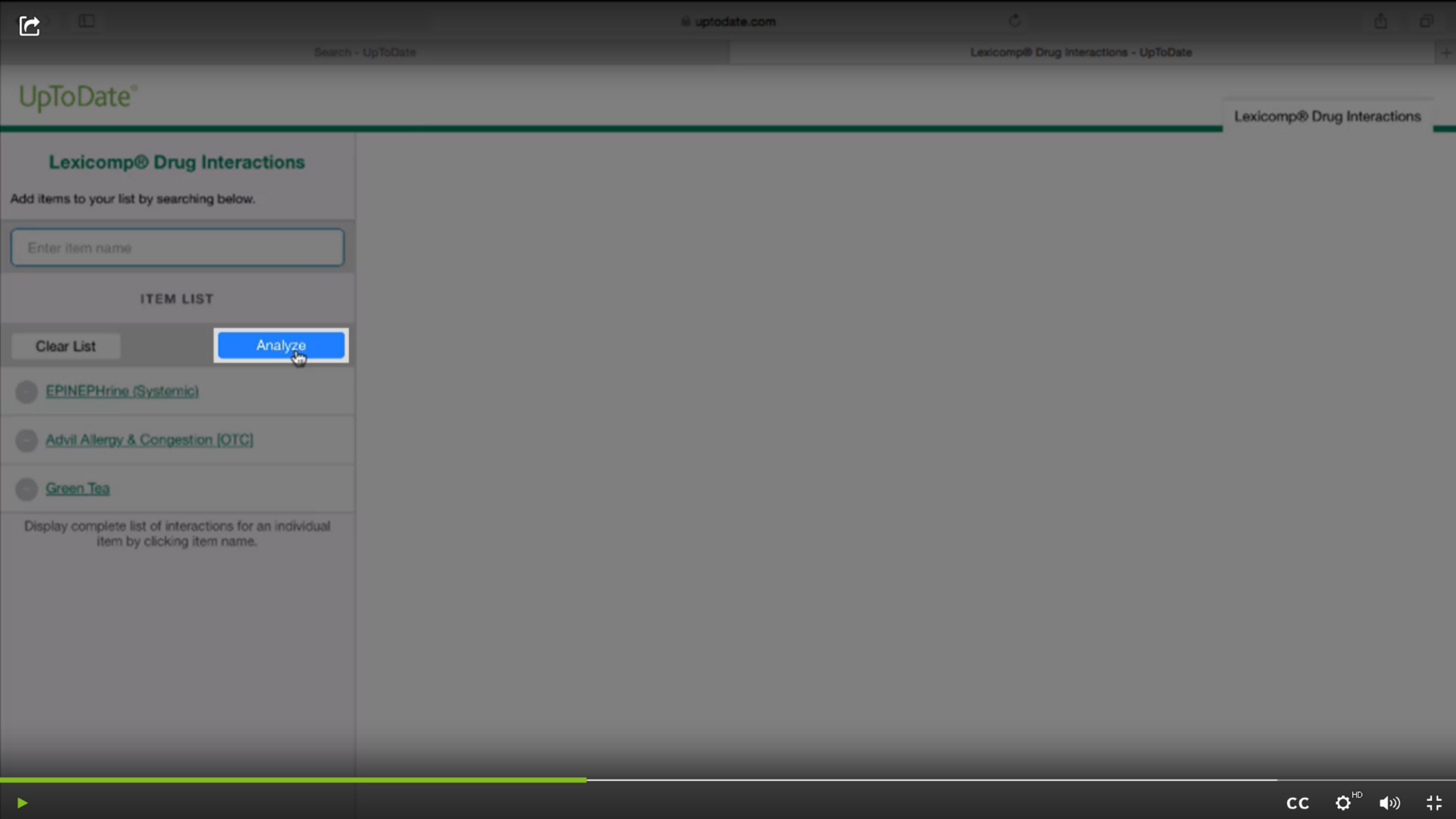
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Advil Allergy & Congestion [OTC]
Green Tea
Display complete list of interactions for an individual item by clicking item name.
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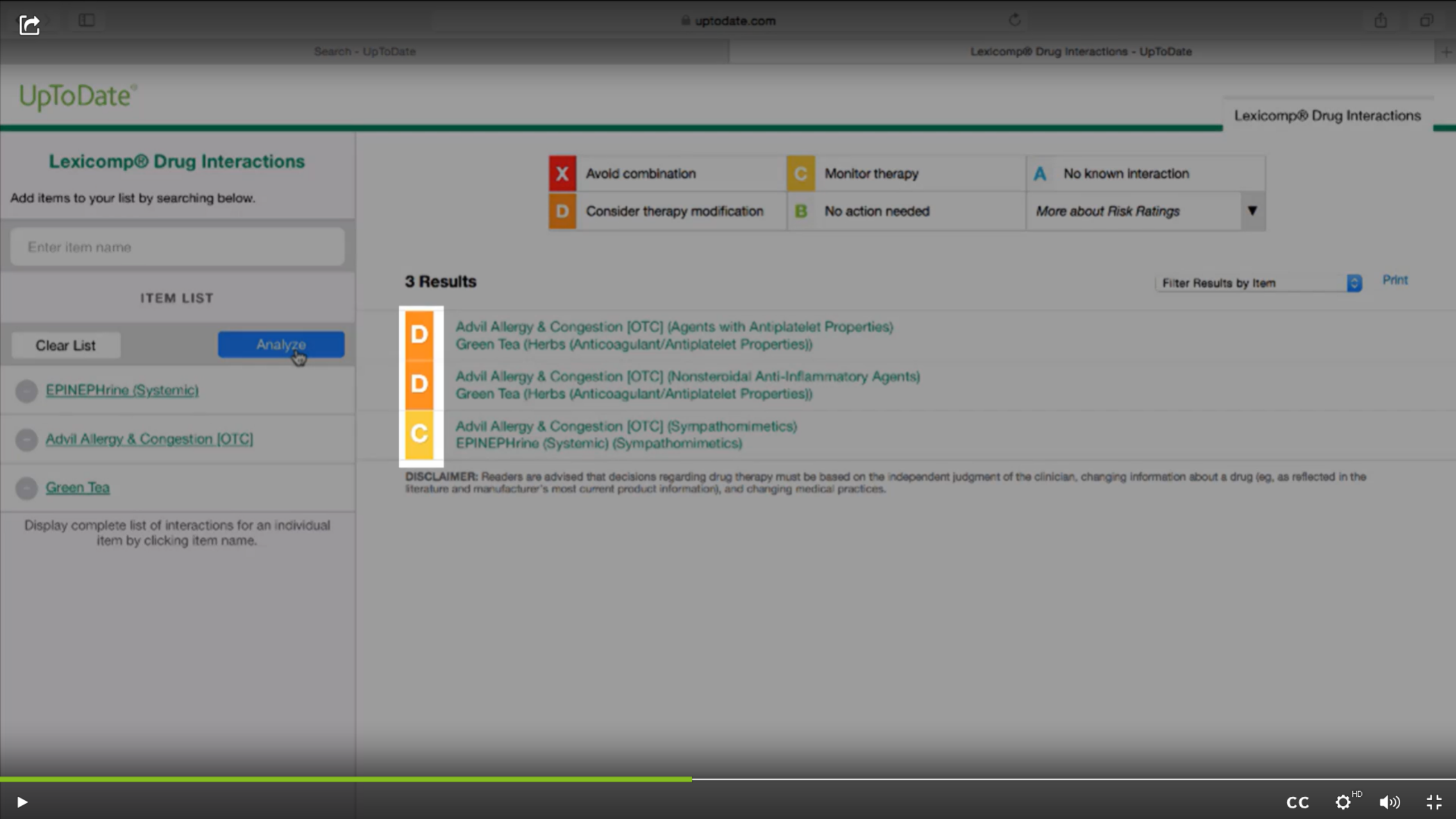
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Enter item name
ITEM LIST
Clear List
Analyze
EPINEPHrine (Systemic)
Advil Allergy & Congestion [OTC]
Green Tea
Display complete list of interactions for an individual item by clicking item name.
X Avoid combination
D Consider therapy modification
C Monitor therapy
B No action needed
A No known interaction
More about Risk Ratings
3 Results
Filter Results by Item
Print
D
Advil Allergy & Congestion [OTC] (Agents with Antiplatelet Properties)
Green Tea (Herbs (Anticoagulant/Antiplatelet Properties))
D
Advil Allergy & Congestion [OTC] (Nonsteroidal Anti-Inflammatory Agents)
Green Tea (Herbs (Anticoagulant/Antiplatelet Properties))
C
Advil Allergy & Congestion [OTC] (Sympathomimetics)
EPINEPHrine (Systemic) (Sympathomimetics)
DISCLAIMER: Readers are advised that decisions regarding drug therapy must be based on the independent judgment of the clinician, changing information about a drug (eg, as reflected in the literature and manufacturer's most current product information), and changing medical practices.
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Lexicomp® Drug Interactions

Add items to your list by searching below.

Enter item name

ITEM LIST

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- EPINEPHrine (Systemic)
- Advil Allergy & Congestion [OTC]
- Green Tea

Display complete list of interactions for an individual item by clicking item name.

Title Agents with Antiplatelet Properties / Herbs (Anticoagulant/Antiplatelet Properties)

Print

Risk Rating D: Consider therapy modification

Summary Herbs (Anticoagulant/Antiplatelet Properties) may enhance the adverse/toxic effect of Agents with Antiplatelet Properties. Bleeding may occur. **Severity** Major **Reliability Rating** Fair

Patient Management The concomitant use of herbs possessing anticoagulation/antiplatelet properties with other herbs or drugs possessing similar properties should be avoided. If used concomitantly, increased diligence in monitoring for adverse effects (eg, bleeding, bruising, altered mental status due to CNS bleeds) must be employed. For patients scheduled for surgical, dental, or other invasive procedures, anticoagulant/antiplatelet herbs should be discontinued 2 weeks prior to the scheduled procedure.

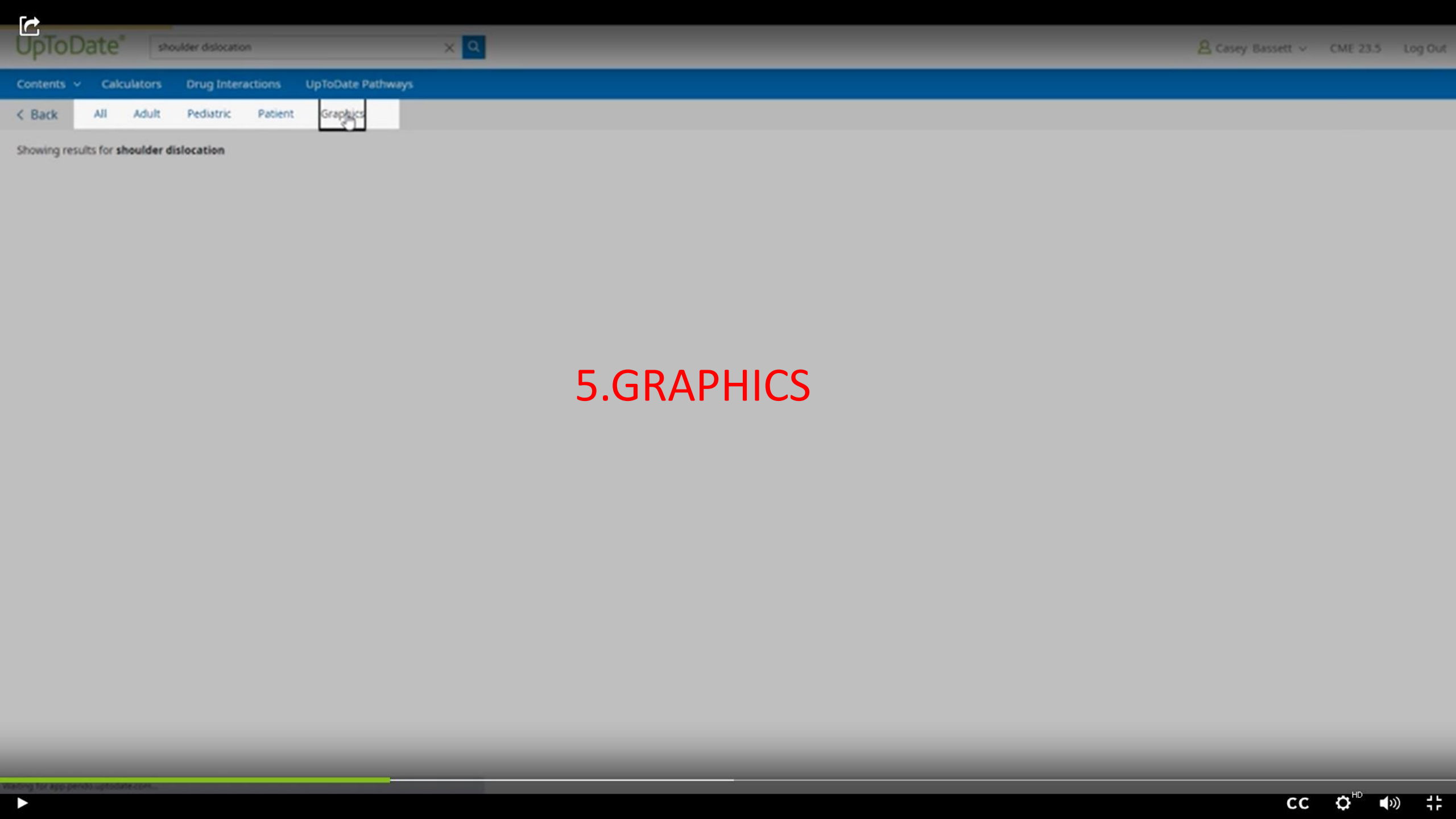
Agents with Antiplatelet Properties Interacting Members Abciximab, Aceclofenac, Acemetacin, Anagrelide, Aspirin, Cangrelor, Cilostazol, Citalopram, Clopidogrel, Dapoxetine, Defibrotide, Desvenlafaxine, Dexibuprofen, Dexketoprofen, Diclofenac (Systemic), Diclofenac (Topical), Diflunisal, Dilazep, Dipyridamole, Dipyrone, DULoxetine, Eptifibatide, Escitalopram, Etodolac, Etofenamate, Fenoprofen, Floctafenine, FLUoxetine, Flurbiprofen (Systemic), FluvoxaMINE, Ibuprofen, Ibuprofen (Topical), Indobufen, Indomethacin, Ketoprofen, Ketorolac (Nasal), Ketorolac (Systemic), Levomilnacipran, Lornoxicam, Loxoprofen, Meclofenamate, Mefenamic Acid, Meloxicam, Milnacipran, Nabumetone, Naproxen, Oxaprozin, PARoxetine, Pelubiprofen, Phenylbutazone, Piracetam, Piroxicam (Systemic), Piroxicam (Topical), Prasugrel, Propyphenazone, Sarpogrelate, Sertraline, Sulfinpyrazone, Sulindac, Tenoxicam, Tiaprofenic Acid, Ticagrelor, Ticlopidine, Tirofiban, Tolfenamic Acid, Tolmetin, Triflusal, Venlafaxine, Vilazodone, Vorapaxar, Vortioxetine, Zaltoprofen

Herbs (Anticoagulant/Antiplatelet Properties) Interacting Members Alfalfa, Anise, Bilberry, Bladderwrack, Bromelain, Cat's Claw, Celery, Chamomile, Coleus, Cordyceps, Dong Quai, Evening Primrose, Fenugreek, Feverfew, Garlic, Ginger, Ginkgo Biloba, Ginseng (American), Ginseng (Panax), Ginseng (Siberian), Grape Seed, Green Tea, Guggul, Horse Chestnuts, Horseradish, Licorice, Prickly Ash, Red Clover, Reishi, SAMe (S-adenosylmethionine), Sweet Clover, Taurine, Turmeric, White Willow

Discussion Many herb products possess the ability to cause bleeding (inhibit clotting/coagulation or primary hemostasis) by one of several mechanisms (e.g., herb contains a coumarin-like constituent or one that is able to inhibit the production/function of platelets).[1,2,3,4] The concomitant use of such herbs with other herbs or drugs possessing a similar pharmacologic potential may increase the risk of bleeding. Caution is advised.

Footnotes

1. Mousa SA. "Antithrombotic Effects of Naturally Derived Products on Coagulation and Platelet Function." *Methods Mol Biol*, 2010, 663:229-40. [PubMed 20617421]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Showing results for shoulder dislocation
5.GRAPHICS
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Showing results for **shoulder dislocation**

Anterior shoulder dislocation on the AP radiograph

In this AP radiograph, the humeral head clearly lies outside the glenoid and below the coracoid process.

AP: anterior posterior.

Graphic 81951 Version 5.0

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Appears in topics

Please view graphics in the context of the topic in which they appear below.

- Shoulder dislocation and reduction
- Traumatic causes of acute shoulder pain and injury in children and adolescents
- Evaluation of acute traumatic shoulder injury in children and adolescents

Other graphics

Routine films include an anteroposterior (AP) (image 1), a scapular "Y" view (image 2), and an axillary view (image 3). The diagnosis of an anterior shoulder dislocation may be straightforward and is often easily vi… age 4). The dislocated humeral head usually lies in a subcoracoid position (figure 8). If the humeral head is subclavicular or subglenoid, there has been a greater… concomitant greater tuberosity fracture or rotator cuff tear is usually present (figure 8).

Normal shoulder with internal and external rotation on radiograph

A false dislocation of the humeral he… ograph in the setting of a proximal humerus fracture if a joint hemarthrosis pushes the humeral head inferiorly, giving the appearance of an anterior shoulder d… se dislocation can be distinguished from a true dislocation using the axillary view (described just below).

The scapular "Y" view is taken with th… e scapular body. The "Y" is formed by the body, spine, and coracoid process. The glenoid falls in the center of the "Y" and is normally obscured by the humeral h… ion is present, the humeral head appears medial to the "Y" (image 5). There may be false negatives with the scapular view, so an axillary view should also be obt…

The axillary view is taken with the pa… ograph plate is placed on the patients shoulder and the x-ray beam projects through the axilla to the plate (picture 2 and image 6). The patient's arm need not be abducted 90 degrees, as this position causes pain. About 10 to 15 degrees of abduction, or just enough to get the x-ray tube between the patient's arm and hip, is usually sufficient to obtain the appropriate view. Alternatively, a Velpeau axillary view can be obtained in which the patient leans back 15 degrees over the edge of a table and the beam is directed from above the shoulder to the plate placed on the edge of the table.

Another view that may be helpful in determining the presence of a dislocation is the true AP (Grashey) view in which the beam is directed at a 45 degree angle in a medial to lateral direction with the x-ray plate just posterior and parallel to the scapular body. This view helps clinicians assess for subtle joint incongruities.

Computed tomography — Computed tomography (CT) is not routinely indicated for a shoulder dislocation. Exceptions might include instances where the exact location of the humeral head cannot be determined using plain films (eg, possible false dislocation) or when a CT angiogram is to be performed because there are signs of axillary artery injury.

Ultrasound — Although ultrasound may be less accurate at detecting potential fractures associated with anterior shoulder dislocations, preliminary observational studies suggest that it is accurate for confirming both the diagnosis and successful reduction of such dislocations [19-23].

Associated injuries (Hill-Sachs and Bankart) — Associated fractures identified on plain radiographs include Hill-Sachs deformities, Bankart lesions, and greater tuberosity fractures. A Hill-Sachs deformity is a cortical depression in the humeral head created by the glenoid rim during dislocation (image 7) [24]. They occur in 35 to 40 percent of anterior dislocations and are seen on the AP radiograph with the arm in internal rotation [7]. Bankart lesions occur when the glenoid labrum is disrupted during dislocation and a bone fragment is avulsed (image 8). Bony Bankart lesions are present in 5 percent of patients, while soft tissue Bankart lesions (no bone is avulsed) occur in approximately 90 percent of patients less than 30 years old with an anterior shoulder dislocation [11,25]. Greater tuberosity fractures are present in 10 percent of patients (image 9) [26]. Indications for orthopedic referral, including selected Bankart and Hill-Sachs lesions, are discussed separately. (See 'Operative treatment' below.)

Posterior shoulder dislocation

- **Mechanism of injury** – A blow to the anterior portion of the shoulder, axial loading of an adducted and internally rotated arm, or violent muscle contractions following a seizure or electrocution represent the most common causes of posterior shoulder dislocation [27-29].

Rate

Routine films include an anteroposterior (AP) (image 1), a scapular "Y" view (image 2), and an axillary view (image 3). The diagnosis of an anterior shoulder dislocation may be straightforward and is often easily visualized on the AP view (image 4). The dislocated humeral head usually lies in a subcoracoid position (figure 8). If the humeral head is subclavicular or subglenoid, there has been a greater degree of displacement and a concomitant greater tuberosity fracture or rotator cuff tear is usually present (figure 9).

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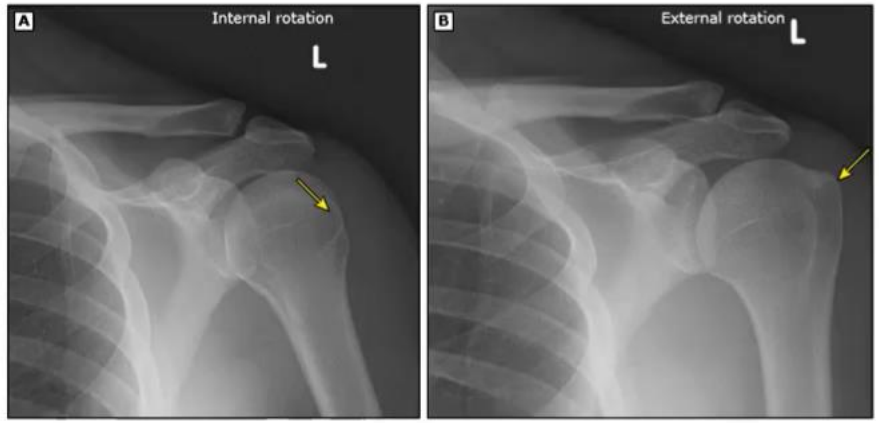
Normal shoulder with internal and external rotation on radiograph



An A-P radiograph with internal rotation (A) shows the position of the greater tuberosity (arrow). With external rotation (B), the greater tuberosity becomes more obvious (arrow).

A-P: anteroposterior.

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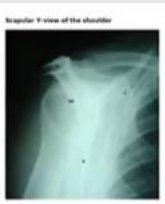
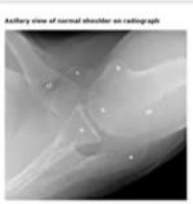
Graphics in this topic


Normal shoulder with internal and external rotation on radiograph


Scapular Y-view of the shoulder


Axillary view of normal shoulder on radiograph


Anterior shoulder dislocation on the AP radiograph

[11,25]. Greater tuberosity fractures are present in 10 percent of patients (image 9) [26]. Indications for orthopedic referral, including selected Bankart and Hill-Sachs lesions, are discussed separately. (See 'Operative treatment' below.)

Posterior shoulder dislocation

- **Mechanism of injury** – A blow to the anterior portion of the shoulder, axial loading of an adducted and internally rotated arm, or violent muscle contractions following a seizure or electrocution represent the most common causes of posterior shoulder dislocation [27-29].
- **Examination** – Examination reveals prominence of the posterior shoulder with flattening anteriorly. The coracoid process appears prominent. The patient holds the arm in adduction and

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shoulder dislocation

Casey Bassett | CME 24.0 | Log Out

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Showing

Anterior shoulder dislocation appearance

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...Patier ...tion need a thorough examination and frequently radiographic imaging to diagnos ...es. An anterior **shoulder dislocation** is usually caused ...

Imag

Follo

Sum

Anterior shoulder dislocation appearance

Radiograph normal shoulder with internal and external rotation

Multidirectional instability of the shoulder

...therefore less memorable, than trauma that produces unidirectional **shoulder instability** from a major injury (eg, anterior **shoulder dislocation**) . More typically, patients either cannot recall an inciting event ...

Determining the presence of instability

Summary and recommendations

Evaluation of the adult with shoulder complaints

...violent muscular contractions such as those that occur with generalized seizures can cause **glenohumeral dislocations**. Generally, the patient can localize pain to the site of injury, and deformity may be present ...

Multidirectional shoulder instability

Summary and recommendations

Throwing injuries of the upper extremity: Clinical presentation and diagnostic approach

...or acceleration phases of throwing . Episodes are most commonly associated with transient **glenohumeral subluxation**. Underlying causes include superior labrum anterior posterior (SLAP) lesions and rotator ...

Transient subluxation ("Dead arm syndrome")

Shoulder problems

Summary and recommendations

Traumatic causes of acute shoulder pain and injury in children and

https://www.uptodate.com/contents/image?topicKey=SM%2F258&view=machineLearning&search=shoulder+disloc...

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6.CALCULATORS

@UPTODATE_EBM

Calculator: Body mass index (BMI) for adults (Metric, Patient education)

BMI is a measure of weight in relation to height. It is the most practical way to estimate if a person is underweight, healthy weight, overweight, or obese.

Enter height and weight:

Height cm

Weight kg

Result:

BMI

Reset form

BMI interpretation

BMI <18.5:	Underweight
BMI ≥18.5 and <25:	Healthy weight
BMI ≥25 and <30:	Overweight
BMI ≥30:	Obesity

References

1. National Institutes of Health (NIH), National Heart, Lung, and Blood Institute (NHLBI). The practical guide: identification, evaluation, and treatment of overweight and obesity in adults. *Bethesda: National Institutes of Health.* 2000, NIH publication 00-4084.

7.GRADED RECOMENDATIONS

@UPTODATE_EBM

SUMMARY AND RECOMMENDATIONS

- Patients with anaphylaxis should be assessed and treated as rapidly as possible, as respiratory or cardiac arrest and death can occur within minutes. Anaphylaxis appears to be most responsive to treatment in its early phases, before shock has developed, based on the observation that delayed epinephrine injection is associated with fatalities. (See 'Immediate management' above.)

- Initial management is summarized in rapid overview tables for adults (table 1) and children (table 2). (See 'Immediate management' above.)

- Epinephrine is lifesaving in anaphylaxis. It should be injected as early as possible in the episode, in order to prevent progression of symptoms and signs. **There are no absolute contraindications to epinephrine use, and it is the treatment of choice for anaphylaxis of any severity**. We recommend epinephrine for patients with apparently mild symptoms and signs (eg, a few hives and mild wheezing) (**Grade 1B**), as well as for patients with moderate-to-severe symptoms and signs (**Grade 1A**). (See 'Epinephrine' above.)

- The route of epinephrine administration depends upon the presenting symptoms. For patients who are **not** profoundly hypotensive or in shock or cardiorespiratory arrest, **intramuscular (IM) injection into the mid-outer thigh** as the initial route of administration is advised, in preference to subcutaneous administration or intravenous (IV) administration (table 3). (See 'Intramuscular epinephrine injection (preferred)' above.)

  - When an exact dose can be drawn up and administered, 0.01 mg/kg (maximum of 0.5 mg) should be administered in the mid-outer thigh every 5 to 15 minutes or more frequently, if necessary.

  - When an autoinjector is used, children weighing less than 25 kg should receive the 0.15 mg dose, and those weighing over 25 kg should receive the 0.3 mg dose administered to the outer thigh every 5 to 15 minutes or more frequently, if necessary. Autoinjector use must be carefully considered in infants and children weighing under 7.5 kg. However, the benefits likely outweigh the risk if this is

Grade 1A recommendation

A Grade 1A recommendation is a strong recommendation, and applies to most patients in most circumstances without reservation. Clinicians should follow a strong recommendation unless a clear and compelling rationale for an alternative approach is present.
Explanation:
A Grade 1 recommendation is a strong recommendation. It means that we believe that if you follow the recommendation, you will be doing more good than harm for most, if not all of your patients.
Grade A means that the best estimates of the critical benefits and risks come from consistent data from well-performed, randomized, controlled trials or overwhelming data of some other form (eg, well-executed observational studies with very large treatment effects). Further research is unlikely to have an impact on our confidence in the estimates of benefit and risk.

Recommendation grades

1. Strong recommendation: Benefits clearly outweigh the risks and burdens (or vice versa) for most, if not all, patients
2. Weak recommendation: Benefits and risks closely balanced and/or uncertain

Evidence grades

A. High-quality evidence: Consistent evidence from randomized trials, or overwhelming evidence of some other form
B. Moderate-quality evidence: Evidence from randomized trials with important limitations, or very strong evidence of some other form
C. Low-quality evidence: Evidence from observational studies, unsystematic clinical observations, or from randomized trials with serious flaws

For a complete description of our grading system, please see the UpToDate editorial policy.

A Grade 1A recommendation is a strong recommendation, and applies to most patients in most circumstances without r
recommendation unless a clear and compelling rationale for an alternative approach is present.

Explanation:

A Grade 1 recommendation is a strong recommendation. It means that we believe that if you follow the recommendation, you will be doing more good t

Grade A means that the best estimates of the critical benefits and risks come from consistent data from well-performed, randomized, controlled trials or observational studies with very large treatment effects). Further research is unlikely to have an impact on our confidence in the estimates of benefit and

Recommendation grades

1. Strong recommendation: Benefits clearly outweigh the risks and burdens (or vice versa) for most, if not all, patients
2. Weak recommendation: Benefits and risks closely balanced and/or uncertain

Evidence grades

A. High-quality evidence: Consistent evidence from randomized trials, or overwhelming evidence of some other form
B. Moderate-quality evidence: Evidence from randomized trials with important limitations, or very strong evidence of some other form
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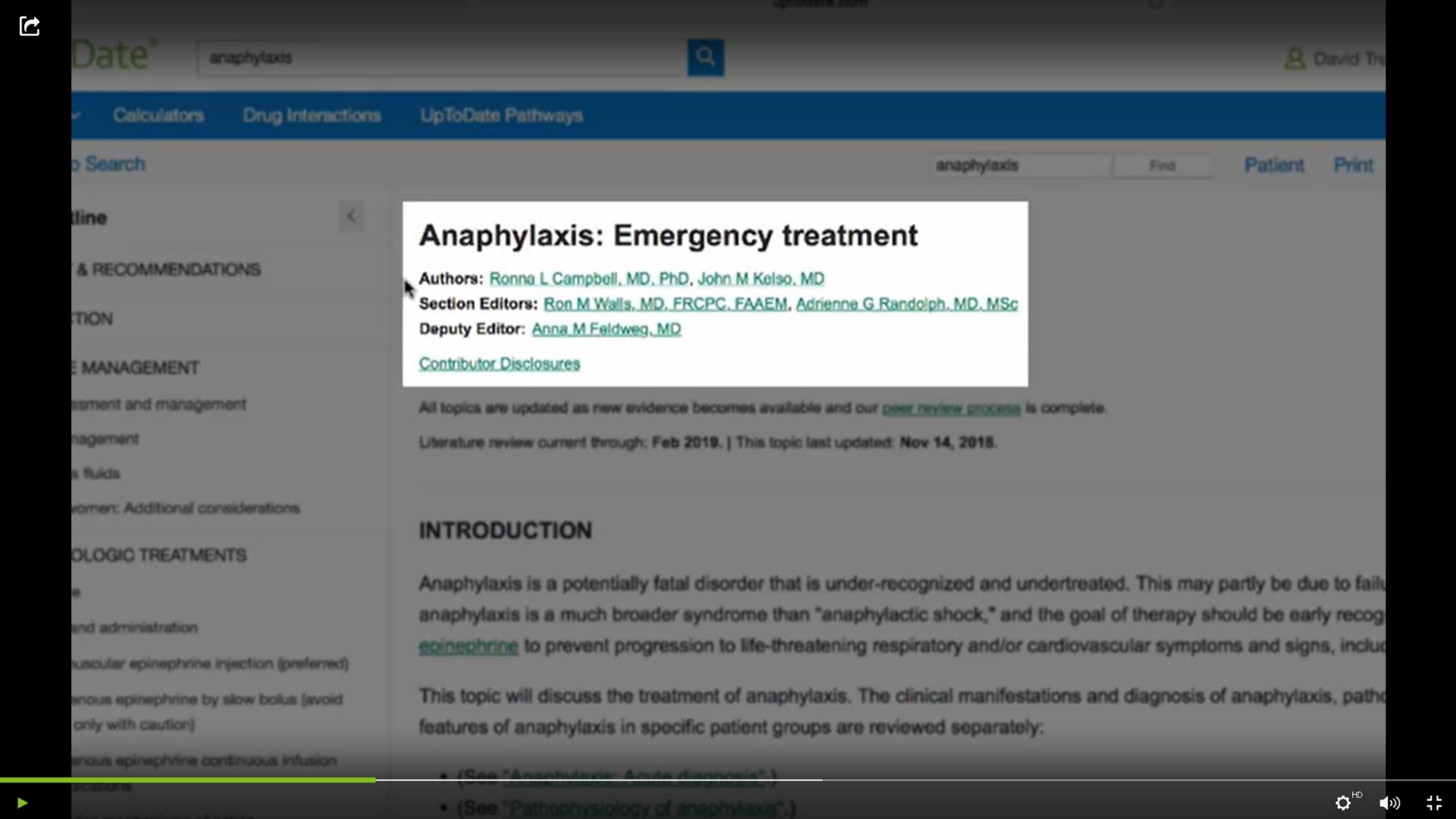
8.AUTHORS AND EDITORS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Anaphylaxis: Emergency treatment
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Section Editors: Ron M Walls, MD, FRCPC, FAAEM, Adrienne G Randolph, MD, MSc
Deputy Editor: Anna M Feldweg, MD
Contributor Disclosures
All topics are updated as new evidence becomes available and our peer review process is complete.
Literature review current through: Feb 2019. | This topic last updated: Nov 14, 2018.
INTRODUCTION
Anaphylaxis is a potentially fatal disorder that is under-recognized and undertreated. This may partly be due to failu
anaphylaxis is a much broader syndrome than "anaphylactic shock," and the goal of therapy should be early recog
epinephrine to prevent progression to life-threatening respiratory and/or cardiovascular symptoms and signs, inclu
This topic will discuss the treatment of anaphylaxis. The clinical manifestations and diagnosis of anaphylaxis, patho
features of anaphylaxis in specific patient groups are reviewed separately:
(See "Anaphylaxis: Acute diagnosis".)
(See "Pathophysiology of anaphylaxis".)

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Anaphylaxis: Emergency treatment

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Medline ® Abstract for Reference 6 of 'Anaphylaxis: Acute diagnosis'

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TI Trends in national incidence, lifetime prevalence and adrenaline prescribing for anaphylaxis in England.

AU Sheikh A, Hippisley-Cox J, Newton J, Fenty J

SO J R Soc Med. 2008;101(3):139.

BACKGROUND: Analysis of primary healthcare datasets offers the possibility to increase understanding of the epidemiology of acute uncommon conditions such as anaphylaxis, but these datasets remain under-exploited.

AIM: To investigate recent trends in the recorded incidence, lifetime prevalence and prescribing of adrenaline for anaphylaxis in England.

METHODS: QRESEARCH is one of the world's largest national aggregated health databases containing the records of over nine million patients. We extracted data on all patients with a recorded diagnosis of anaphylaxis and calculated annual age-sex standardized incidence and lifetime period prevalence rates for each year from 2001-2005. We also analysed trends in adrenaline prescribing in those with a recorded diagnosis of anaphylaxis. National population figures were used to estimate numbers of people in England that have experienced anaphylaxis at some point in their lives.

RESULTS: The age-sex standardized incidence of anaphylaxis was 6.7 per 100,000 person-years in 2001 and increased by 19% to 7.9 in 2005. Lifetime age-sex standardized prevalence of a recorded diagnosis of anaphylaxis was 50.0 per 100,000 in 2001 and increased by 51% to 75.5 in 2005. Prescribing of adrenaline increased by 97% over this period. By the end of 2005 there were an estimated 37,800 people that had experienced anaphylaxis at some point in their lives.

CONCLUSIONS: Recorded incidence, lifetime prevalence and prescribing of adrenaline for anaphylaxis all showed substantial increases in recent years. An estimated 1 in 1,333 of the English population have at some point in their lives experienced anaphylaxis.

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Anaphylaxis: Emergency treatment

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Contributor Disclosures

All topics are updated as new evidence becomes available and our peer review process is complete.

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INTRODUCTION

Anaphylaxis is a potentially fatal disorder that is under-recognized and undertreated. This may partly be due to failure to appreciate that anaphylaxis is a much broader syndrome than "anaphylactic shock," and the goal of therapy should be early recognition and treatment with epinephrine to prevent progression to life-threatening respiratory and/or cardiovascular symptoms and signs, including shock.

This topic will discuss the treatment of anaphylaxis. The clinical manifestations and diagnosis of anaphylaxis, pathophysiology, and unique features of anaphylaxis in specific patient groups are reviewed separately:

- (See "Anaphylaxis: Acute diagnosis".)
- (See "Pathophysiology of anaphylaxis".)
- (See "Fatal anaphylaxis".)
- (See "Anaphylaxis: Confirming the diagnosis and determining the cause(s)".)
- (See "Anaphylaxis in infants".)

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