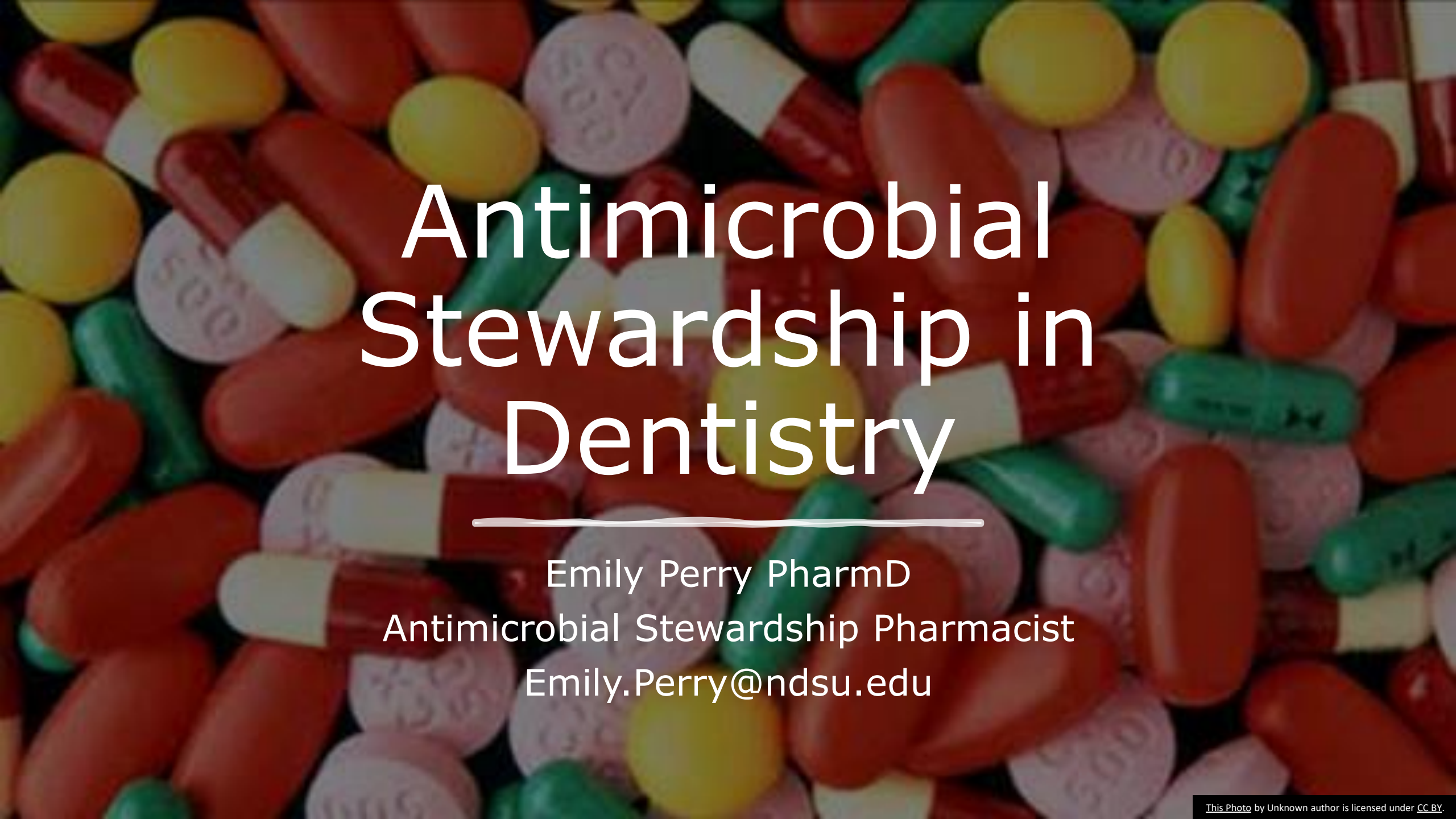

Antimicrobial Stewardship in Dentistry

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Disclosures:

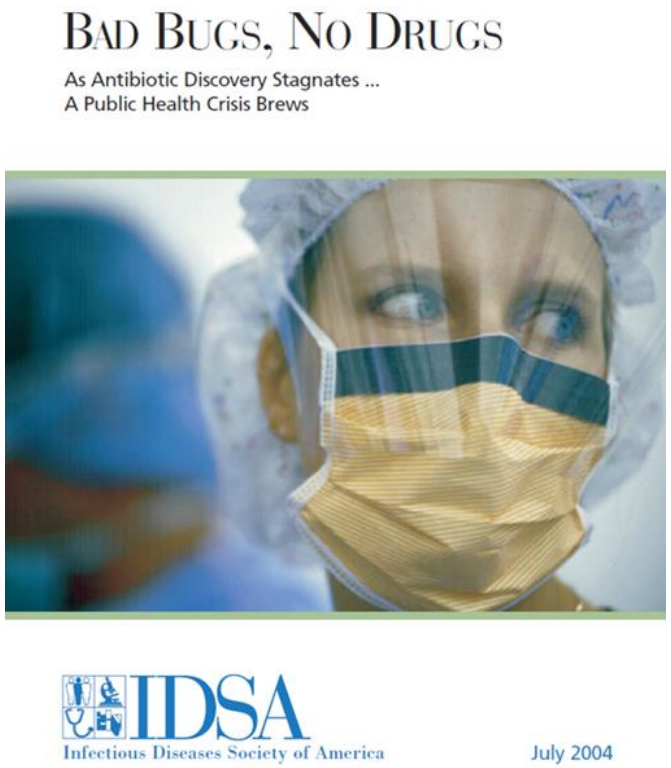
- Support for all or part of these activities has been provided by the Department of Health and Human Services through the CDC Epidemiology and Laboratory Capacity program.

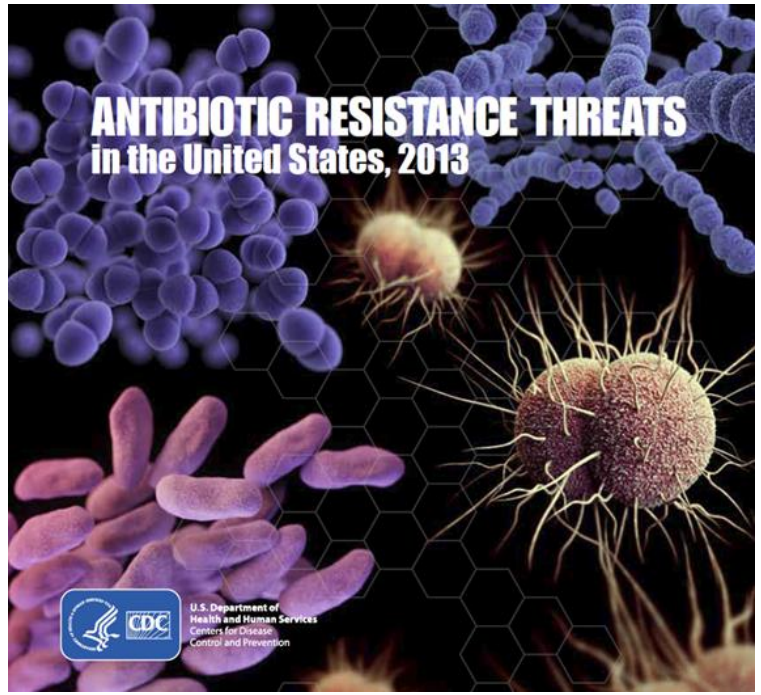
Objectives

Define CDC's core elements of outpatient antimicrobial stewardship

Determine antimicrobial stewardship interventions for management of common conditions in dentistry

Identify barriers to stewardship in practice





History in the making…

History in the making…

- In 2014, President Obama issued an executive order and a National Action Plan that directed the Department of Health and Human Services,
- "to review existing regulations and propose new regulations and other actions… that require hospitals and other inpatient healthcare facilities to implement robust antibiotic stewardship programs (ASPs) that adhere best practices, such as those identified by the CDC."
- Executive Order -- Combating Antibiotic-Resistant Bacteria | whitehouse.gov (archives.gov)

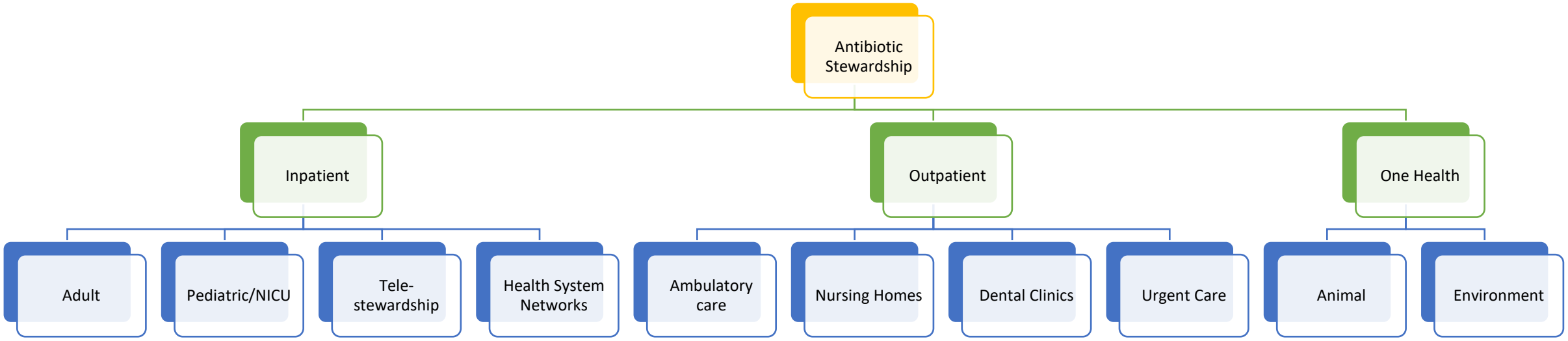
History in the making…

- Created 8 elements of performance
- Implementation Jan 2017
- Updated in 2022

- Created rules for CMS participation for acute care hospitals, critical access hospitals, and long-term care facilities (LTCF)
- LTCFs-antibiotic use protocols and system to monitor antibiotic use
- Implementation date of Nov 2017

Skilled Nursing Facility Center | CMS
A Trusted Partner in Patient Care | The Joint Commission

Expansion of Antimicrobial Stewardship



Antibiotic use

- In the United States in 2021, 211.1 million antibiotics were prescribed of those 25.5 million were from dental professionals

- Roughly 12% of all prescriptions written by the dentistry profession

https://www.cdc.gov/antibiotic-use/data/report-2021.html

Oral antibiotic prescribing by specialty- United States 2021

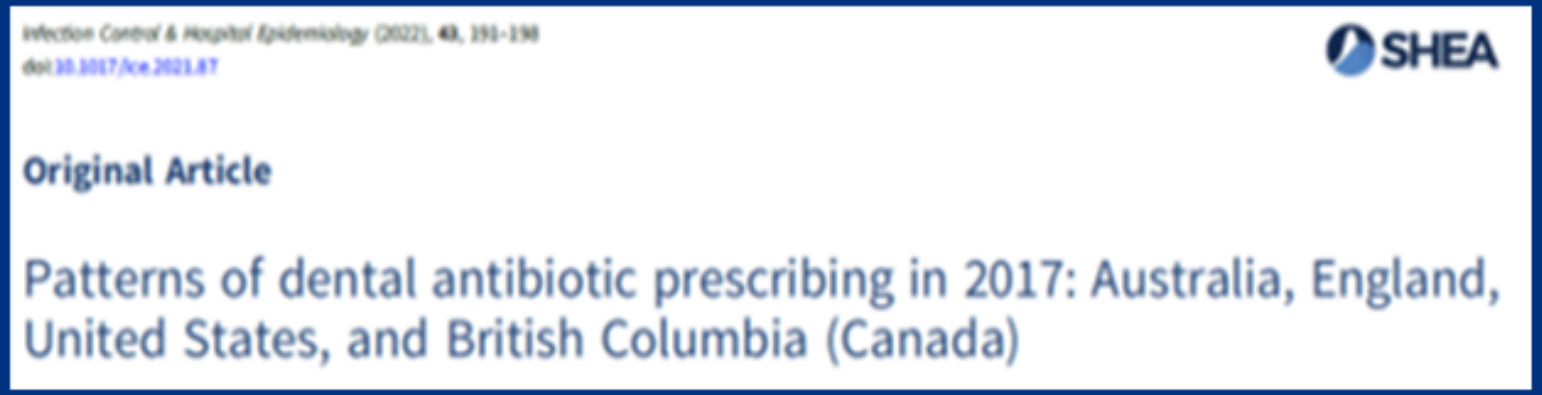
SPECIALTY	NUMBER OF ANTIBIOTIC PRESCRIPTIONS (MILLIONS)	ANTIBIOTIC PRESCRIPTIONS PER HEALTHCARE PROFESSIONAL, RATE
Primary Care Physicians	61.2	258
Physician Assistants and Nurse Practitioners	69.8	403
Surgical Specialties	16.3	183
Dentistry	25.5	208
Emergency Medicine	10.7	332
Dermatology	5.7	505
Obstetrics/Gynecology	4.6	122
Other	17.1	82
All Healthcare Professionals	211.1	231

https://www.cdc.gov/antibiotic-use/data/report-2021.html

Dental Antibiotic Prescribing in the U.S. Compared to Other Countries

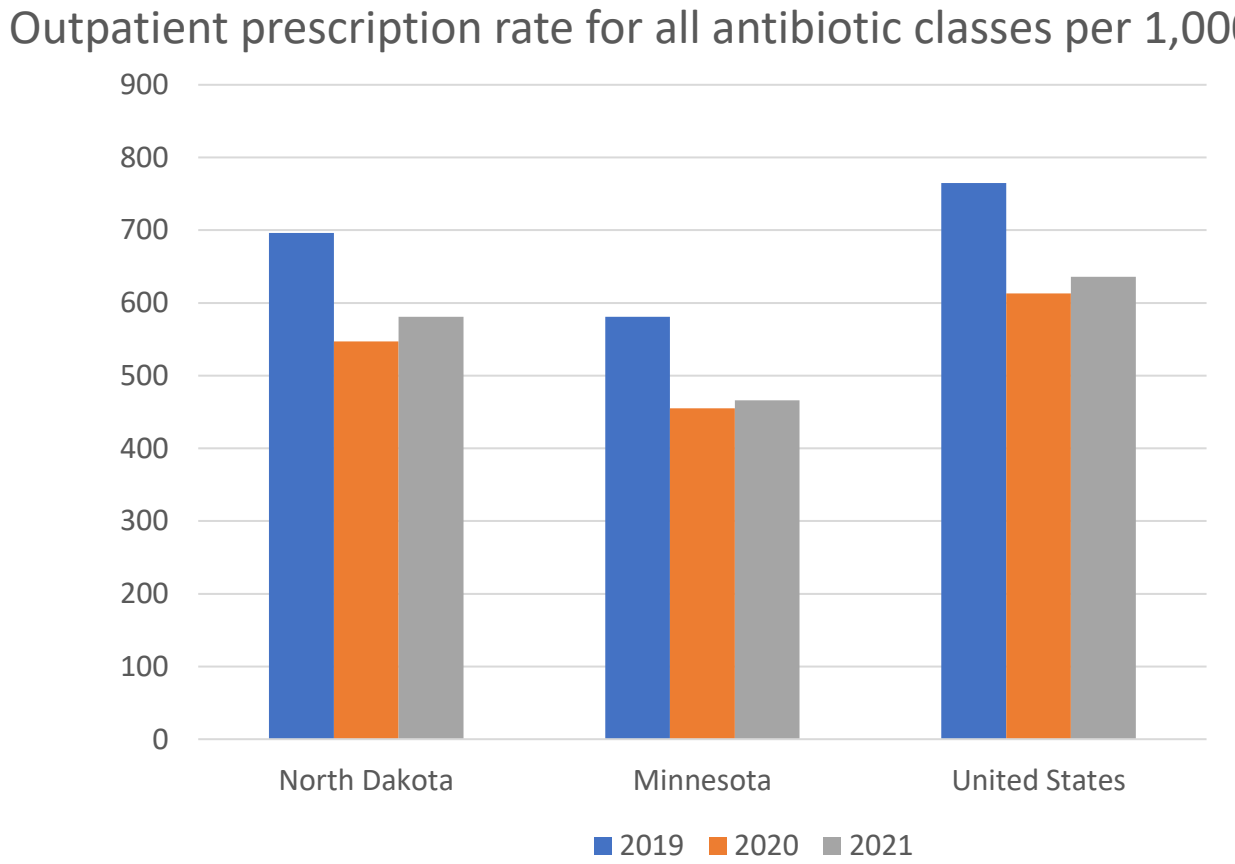
Dental antibiotic prescribing is higher in the United States compared to other countries.

- The U.S. antibiotic prescription rate was twice as high as in Australia.
- Prescribing of clindamycin was also much more common in the United States.



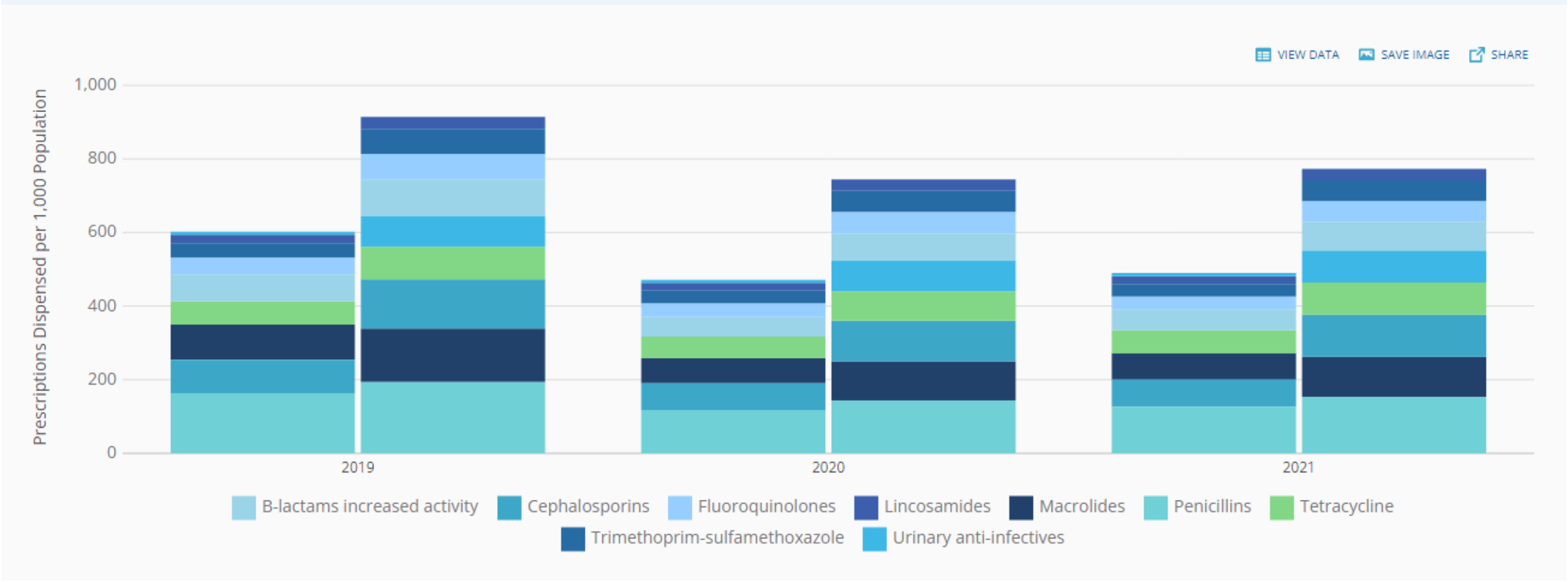
Thompson, W., Teoh, L., Hubbard, C., et al. (2022). Patterns of dental antibiotic prescribing in 2017: Australia, England, United States, and British Columbia (Canada). Infection Control & Hospital Epidemiology, 43(2), 191-198.

Antibiotic prescriptions 2019-2021



All Antibiotic Classes | A.R. & Patient Safety Portal (cdc.gov)

Comparing Antibiotic Classes and Gender



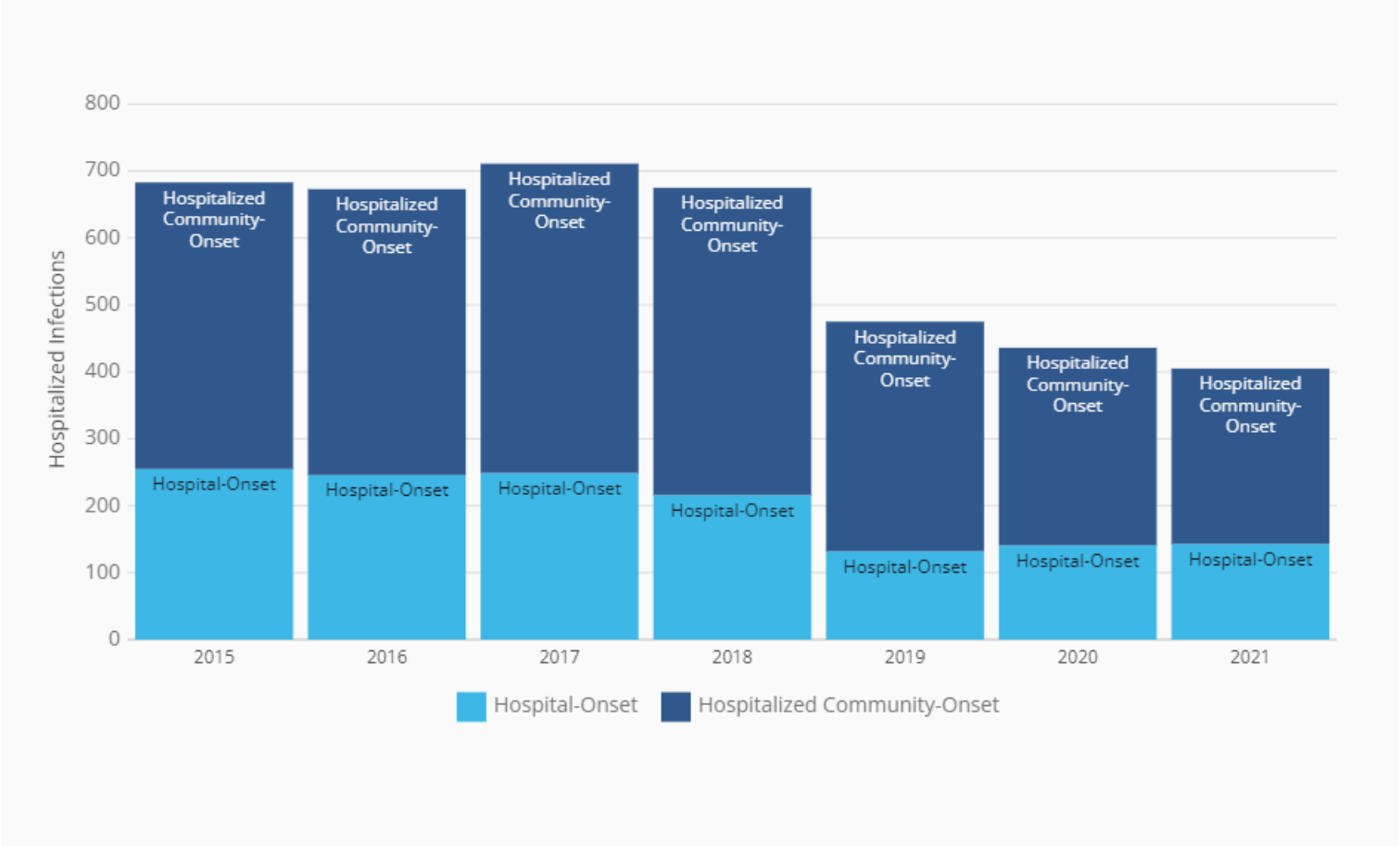
https://arpsp.cdc.gov/profile/antibiotic-use/all-classes?tabsection-27=2&tabsection-30=1&year-select-rate-by-state=year2019&year-select-rate-map=year2021

Antibiotics aren't always safe!

- Over 145,000 emergency hospital visits
- More than half of the visits were from adults aged 20 to 50 years,
- Approximately 75% of the cases involved allergic reactions to antibiotics

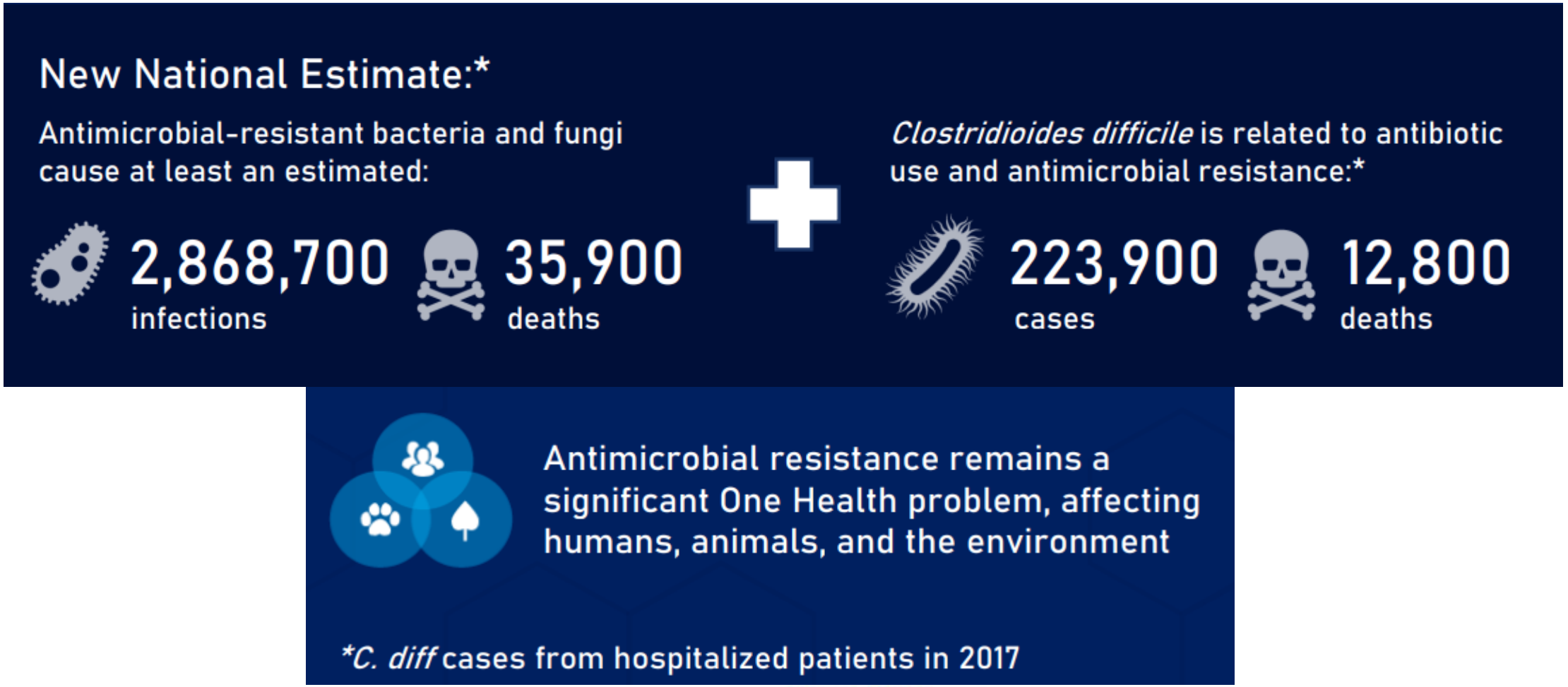
https://www.ada.org/resources/research/science-and-research-institute/oral-health-topics/antibiotic-stewardship

Hospitalized C.diff Infections



https://arpsp.cdc.gov/profile/nhsn/cdi?hospital-select-time=hospital109&state-select-time=state38&tabsection-251=1

The Threat of Antimicrobial Resistance in the United States



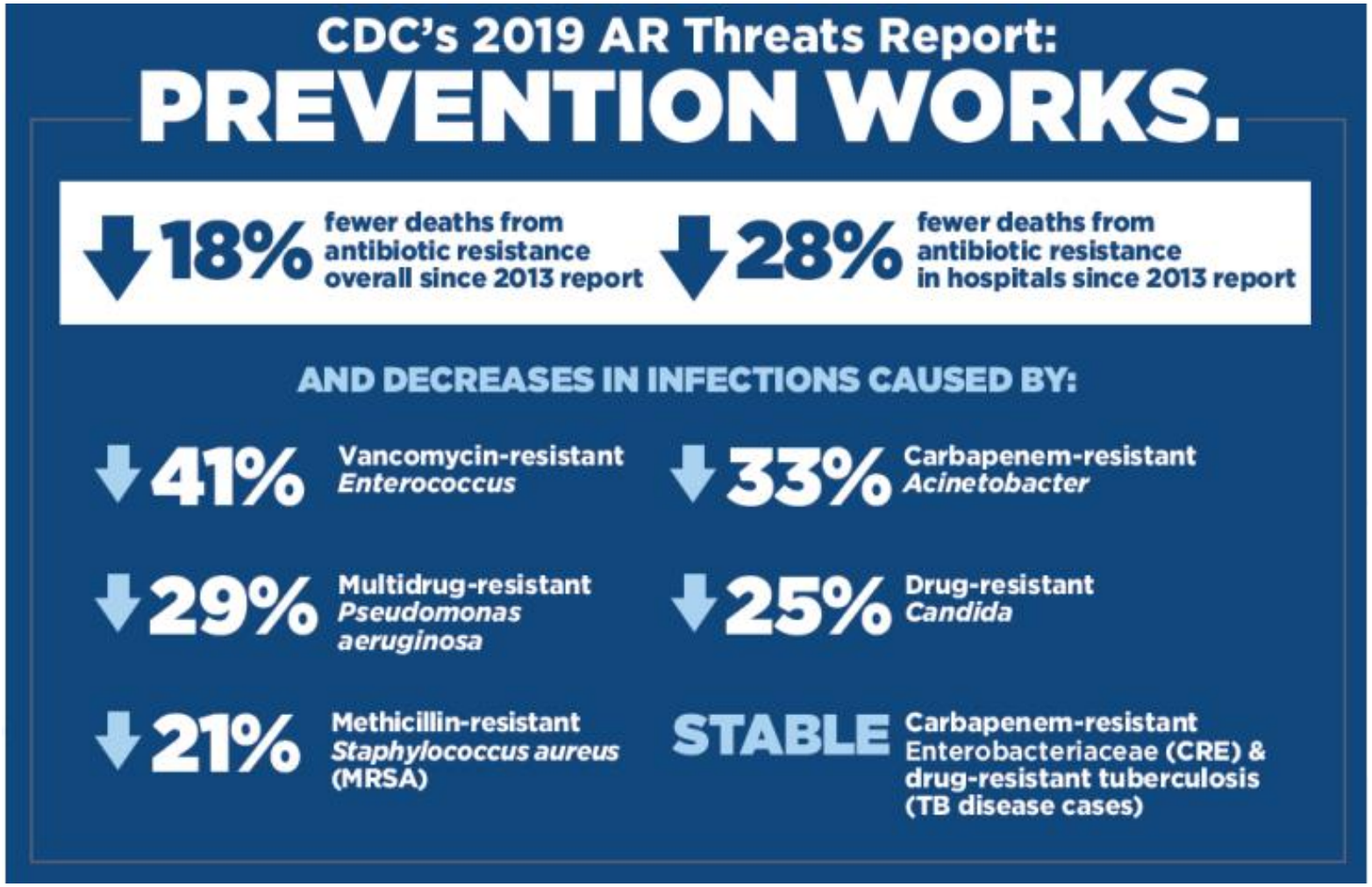
https://www.cdc.gov/DrugResistance/Biggest-Threats/

Global Burden of Antimicrobial Resistance

- Recent data and models highlight the need for expanded efforts to prevent infections and stop the spread of antimicrobial resistance (AR) around the world.
  - Estimated 13.7 million infection-related deaths in 2019,
  - Estimated 4.95 million deaths associated with, including 1.27 million deaths attributable to, bacterial AR in 2019
    - more than HIV or malaria.

Murray CJL, Ikuta KS, Sharara F, et al. Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. *The Lancet*. 2022;399(10325):629-655. doi:10.1016/S0140-6736(21)02724-0

Stewardship is critical and it works!



https://www.cdc.gov/drugresistance/pdf/threats-report/2019-ar-threats-report-508.pdf

The COVID-19 Affect on Resistance

- Reversed progress combating antimicrobial resistance
  - Increase in resistant hospital-onset infections and deaths
  - Increase in healthcare associated resistant infections
  - 80% of Covid patients received an antibiotic

In the first year of the pandemic:

⬆ 15%

Resistant infections & deaths increased 15% in hospitals in 2020

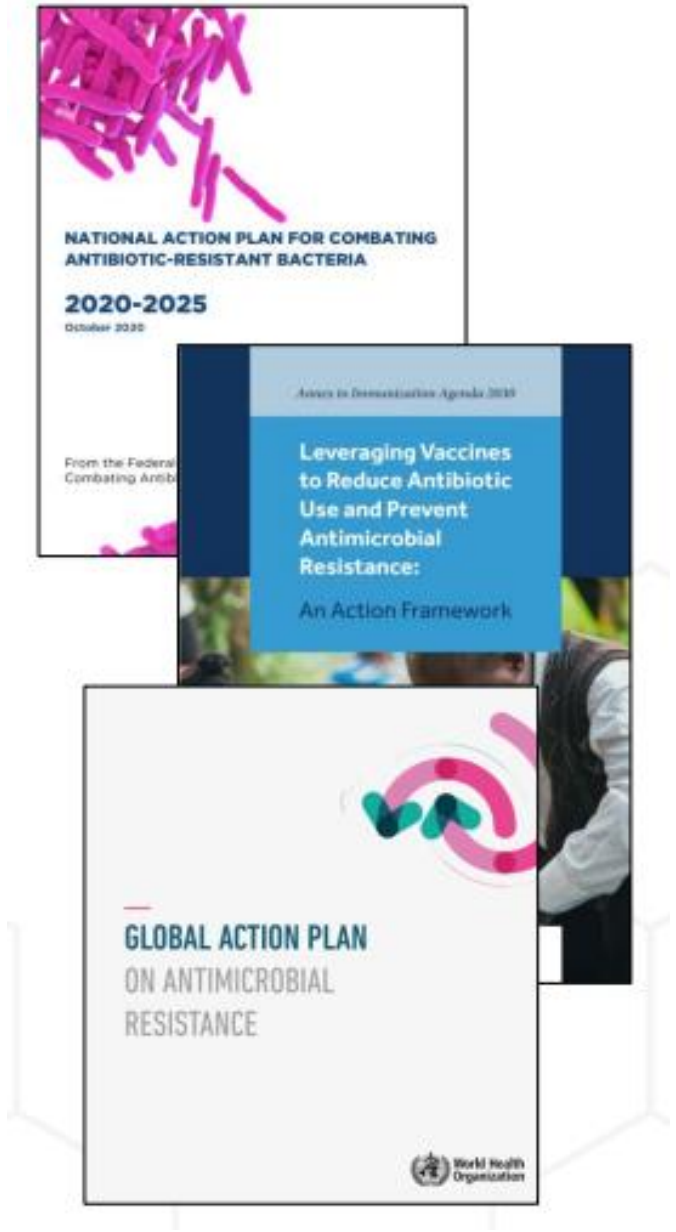
~ 80%

80% of patients hospitalized with COVID-19 received an antibiotic March-Oct. 2020, most were probably not needed

CDC. COVID-19: U.S. Impact on Antimicrobial Resistance, Special Report 2022. Atlanta, GA: U.S. Department of Health and Human Services, CDC; 2022. https://www.cdc.gov/drugresistance/covid19.html

Global Action Plan

- **Antimicrobial use and access**
- **Infection prevention and control**
- **Tracking and data**
- **Vaccines, therapeutics, and diagnostics**
- **Environment and sanitation**



Outpatient Core Elements of Stewardship

https://www.cdc.gov/antibiotic-use/core-elements/outpatient.html

Commitment

- Display support for appropriate antibiotic use
- Antibiotic steward in the office
- Include antibiotic stewardship in position descriptions or evaluations
- All staff help set patient expectations

Action for Policy and Practice

- Use evidence-based diagnostic criteria and treatment recommendations

- Require written justification in the dental record for all antibiotic use

Tracking and Reporting

- When and why antibiotics are being used

- Review outcomes at provider or facility level and provide feedback

Education and Expertise

- Educate patients when antibiotics are and are not needed
- Educate patients on potential harms of antibiotic treatment
- Provide educational materials

Step-by-step guide to fixing your toothache

1. What is this leaflet for?

To help you get the most out of your urgent dental appointment, the dentist will use this leaflet to explain:

- the cause of your toothache;
- how they can treat it; and
- things to watch for afterwards.

Your appointment today is with:

Name of dentist

Date

As you wait to see the dentist, please answer the questions in **section 2**.

Give this leaflet to the dentist in surgery. Then take it home with you afterwards.

2. Before your appointment

Tell the dentist about your symptoms and concerns by answering these questions.

A) How much pain are you in now? (Circle one.)

0 1 2 3 4 5 6 7 8 9 10

No pain **Worst pain**

B) What best describes the pain? (Tick one.)

- ☐ Short and sharp
- ☐ Constant and severe
- ☐ Dull ache

Other (please say)

C) How anxious are you now? (Circle one.)

0 1 2 3 4 5 6 7 8 9 10

Not anxious **Extremely anxious**

D) What do you expect from this appointment?

For more information about urgent dental problems, go to:

www.nhs.uk/conditions/toothache

3. Do I need antibiotics?

antibiotics DON'T cure toothache!

To fix toothache quickly and stop it coming back, you will usually need a dental procedure.

If you have an abscess, you might need antibiotics if you have:

- visible swelling on your face or neck;
- difficulty opening your mouth, speaking or swallowing; or
- a high temperature.

Taking antibiotics when you don't need them puts you and your family at risk.

Risks include:

- developing infections which do not respond to antibiotics;
- spreading superbugs which are resistant to antibiotics, such as MRSA; and
- side effects, including allergies and stomach upsets

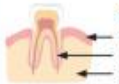
The most severe form of these side effects can be life-threatening, for example anaphylaxis and *C. difficile* colitis.

Take your dentist's advice.

For your dentist

4. What is causing my toothache or abscess?

The dentist will decide the likely cause of your problem, after asking you questions, looking in your mouth and maybe doing some tests or x-rays. (Dentist to tick a box)



Healthy tooth
- Gums
- Nerve in the tooth pulp
- Supporting bone

☐ **Toothache from the pulp**
- Nerve in the tooth hurts, may be from decay or a crack.
- The tooth may be dying.

☐ **Dead tooth**
- Nerve in the tooth is dead.
- Nerves in the bone may hurt.
- An abscess may be forming.

☐ **Abscess**
- Nerve in the tooth is dead.
- Nerves in the bone may hurt.
- Pus collects around the tooth.

☐ **Dry socket**
- Nerves in the bone may hurt after the tooth has been removed.
- Inflammation, not infection.

☐ **Wisdom tooth problem**
- Gum around the tooth hurts.
- Nerve in the tooth is fine.
- Inflammation or infection.

For you and your dentist

5. Fixing your toothache or abscess

The dentist will explain which of these options should fix your problem today. (Dentist to tick a box or boxes)

- ☐ Normal filling
- ☐ Remove the nerve to try to save the tooth
- ☐ Remove the tooth
- ☐ Clean around the gums or in the dry socket
- ☐ Prescription for _____
- ☐ Something else _____

Talk to the dentist about which option you prefer.
If you choose to do nothing, make sure you know what to do if things gets worse.

Will I need more treatment?
The dentist will explain if you need more treatment after this appointment:

- to stop the problem coming back; or
- to replace missing teeth.

Crystal Mark 23318
Clarity approved by Plain English Campaign

To remember when you get hom

6. When should I get further help?

Call your dentist or NHS 111 if you have:

- symptoms that do not improve within two days;
- a swollen cheek or jaw; or
- severe diarrhoea, vomiting, fever and stomach pain, which are signs of antibiotic-related colitis.

If you have the following serious signs, get emergency medical care.

Signs of serious infection
- There is swelling around an eye or your throat
- Breathing, swallowing or speaking is difficult
- Your temperature is over 38°C or under 36°C
- Your heart is racing
- You feel confused

Signs of a serious reaction to antibiotics
- Sudden swelling of your lips, tongue or throat
- Trouble breathing
- Feeling faint or dizzy

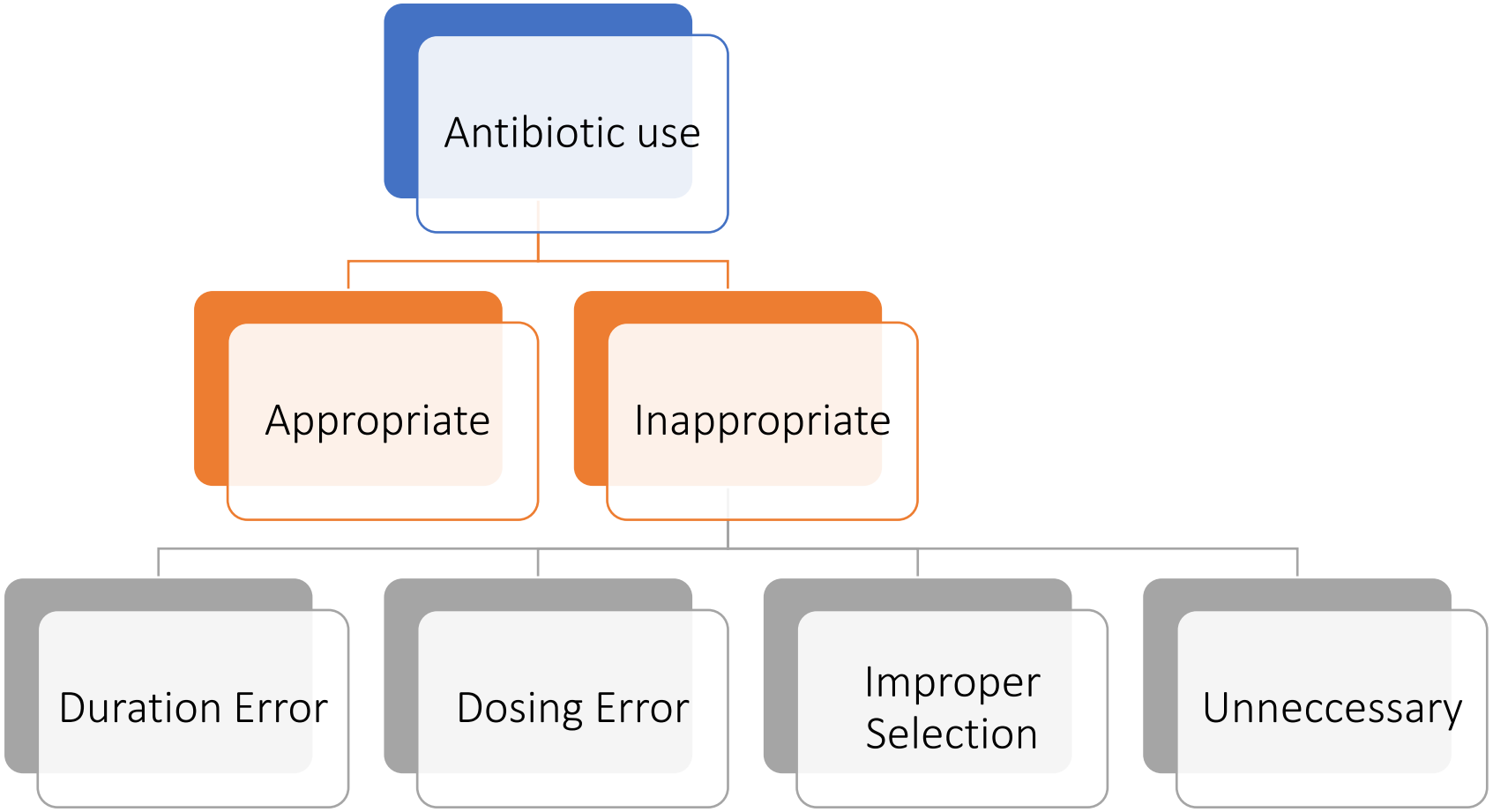
To help improve the safety of medicine, please report any side effects you have from antibiotics, at:

www.mhra.gov.uk/yellowcard

Version 1.0 03/20

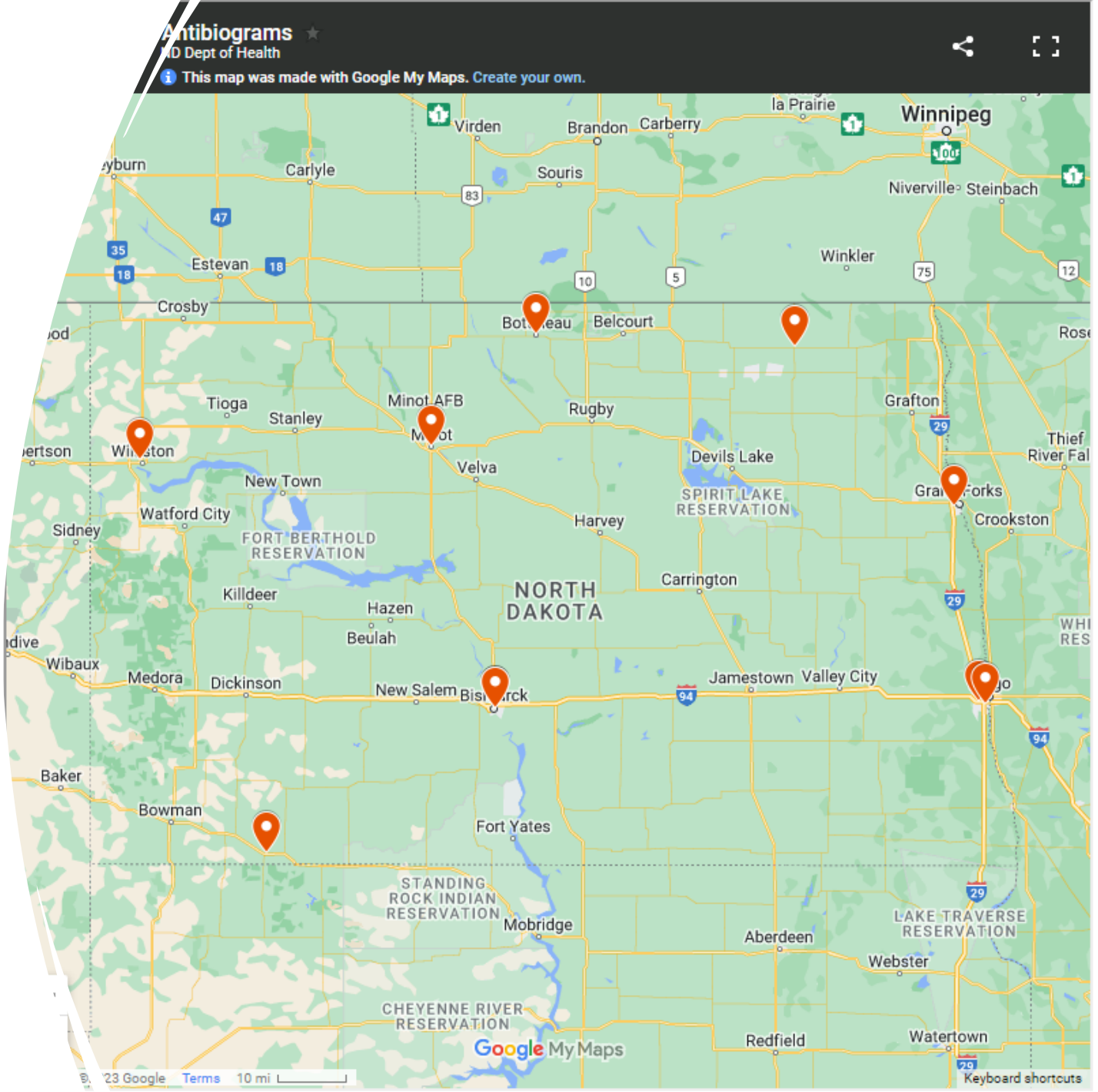
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8615064/

Antibiotic Use



North Dakota Antibiograms

https://www.hhs.nd.gov/health/diseases-conditions-and-immunization/antibiotic-resistance-and-antimicrobial-stewardship/antibiotic-resistance-and-antimicrobial-stewardship/antibiograms



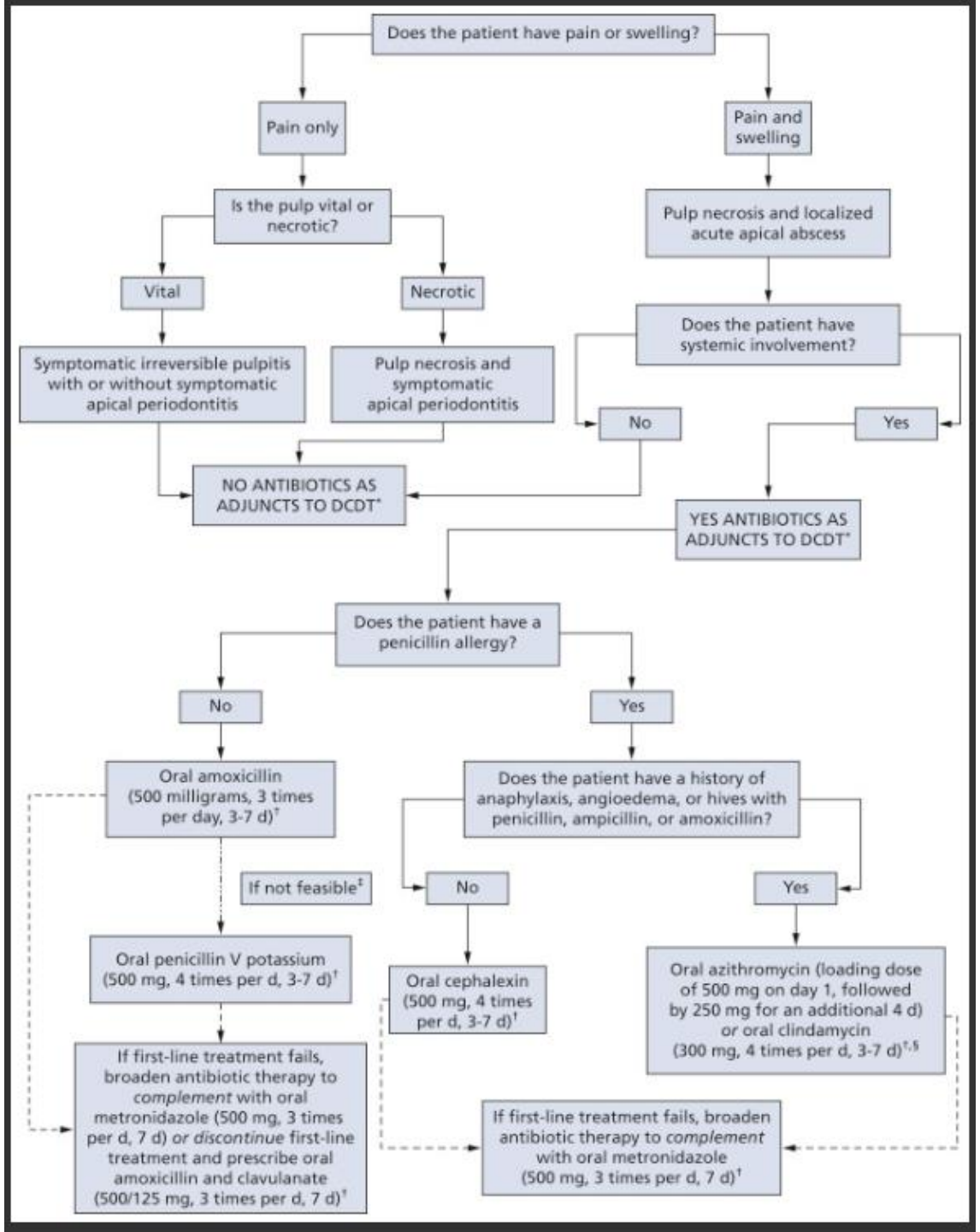
CDC Division of Oral Health definition

- “appropriate antibiotic prescribing means antibiotics are only prescribed when needed, and when needed, the right antibiotic is selected and prescribed at the right dose and for the right duration” and “appropriate antibiotic prescribing should be in accordance with evidence-based national and local clinical practice guidelines, when available.”

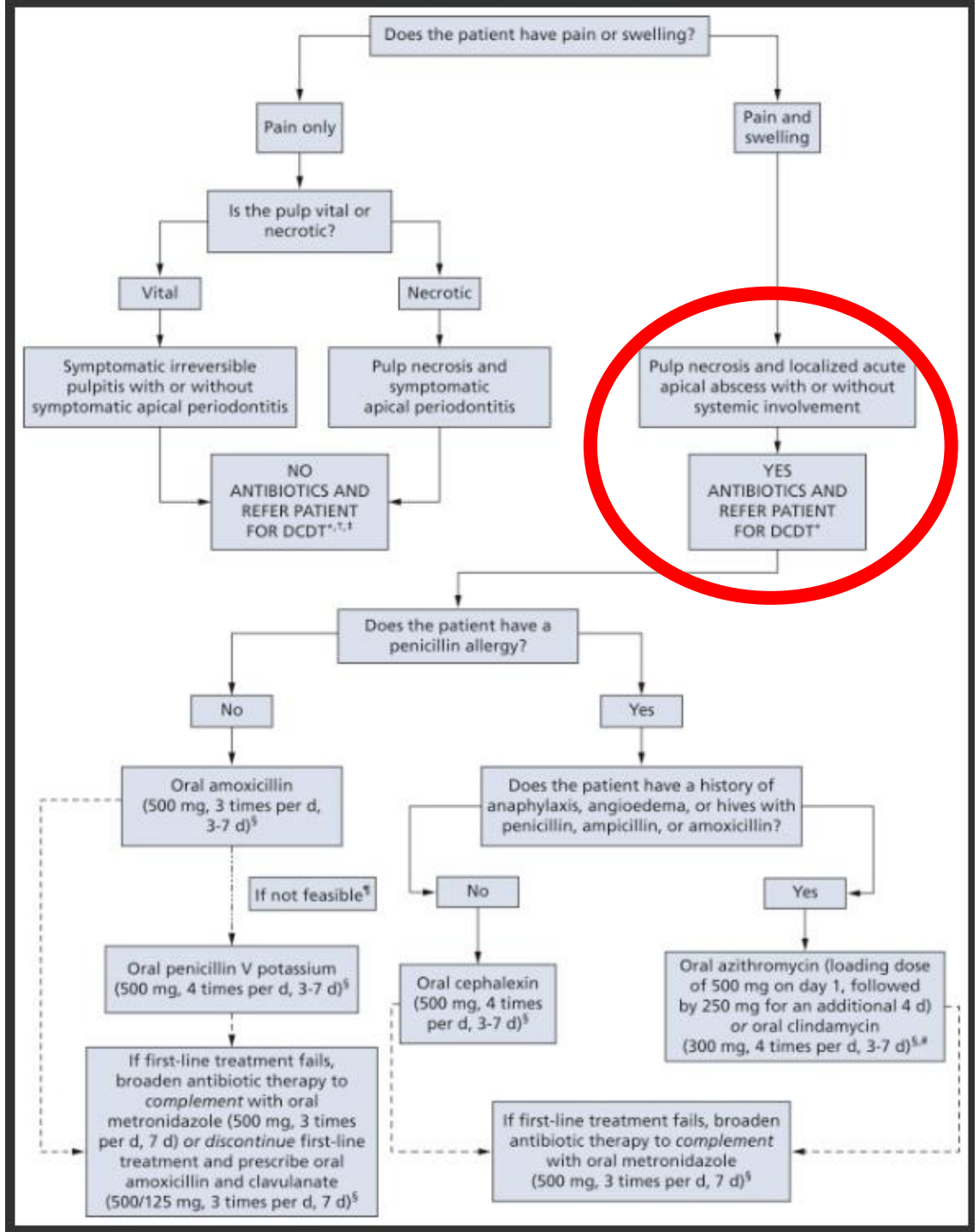
https://www.ada.org/resources/research/science-and-research-institute/oral-health-topics/antibiotic-stewardship

Evidence-based clinical practice guideline on antibiotic use for the urgent management of pulpal- and periapical-related dental pain and intraoral swelling

A report from the American Dental Association



Clinical Pathway for treatment of immunocompetent adult patient when definitive, conservative dental treatment (DCDT) is **immediately** available.



Clinical Pathway for treatment of immunocompetent adult patient when DCDT is **NOT** immediately available.

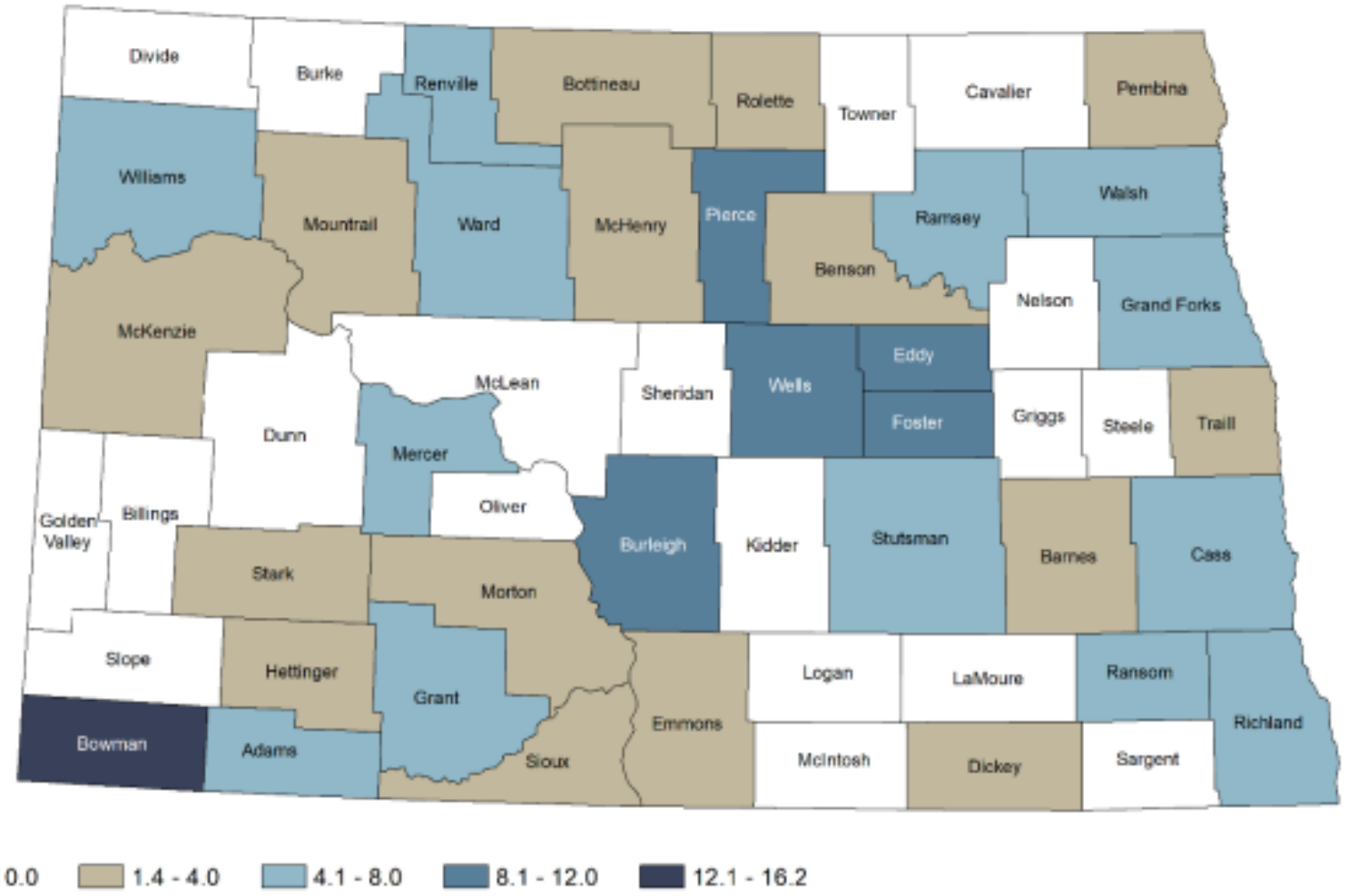


Figure 8.21. **Rate of dentists per 10,000 North Dakota residents, by county, 2021.[24]**

https://med.und.edu/about/publications/biennial-report/_files/docs/seventh-biennial-report.pdf

DENTISTS: *BE ANTIBIOTICS AWARE*

Treating Patients with Dental Pain and Swelling

American Dental Association (ADA) treatment guidelines state that antibiotics are not needed for the urgent management of most dental pain and intraoral swelling associated with pulpal and periapical infections in immunocompetent adult patients without additional comorbidities.[1]

Patients with dental pain and intraoral swelling should undergo **definitive, conservative dental treatment (DCDT)** and, if needed, use over-the-counter pain relievers such as acetaminophen and ibuprofen. The ADA expert panel recommends **NOT prescribing antibiotics** as an adjunct to most dental conditions when DCDT is available due to limited benefit and potential harm associated with antibiotic use.[1]

Patients should be referred for urgent evaluation if their condition worsens, they develop a deep space infection, or sepsis is suspected.

ADA Treatment Recommendations[1]

Pulpal/Periapical Condition	DCDT Immediately Available		DCDT Not Immediately Available	
	Prescribe Antibiotics	Perform DCDT	Prescribe Antibiotics	Refer to DCDT
Symptomatic irreversible pulpitis with or without symptomatic apical periodontitis	X	✓	X	✓ Interim monitoring
Pulp necrosis and symptomatic apical periodontitis	X	✓	X*	✓ Interim monitoring
Pulp necrosis and localized acute apical abscess without systemic involvement	X	✓	✓	✓ Urgent referral
Pulp necrosis and localized acute apical abscess with systemic involvement	✓	✓	✓	✓ Urgent referral

**If DCDT is not feasible, provide a delayed antibiotic prescription to be filled after a predetermined period if symptoms worsen or do not improve*

✓ ADA Antibiotic Recommendations†

Amoxicillin (500mg, 3 times per day, 3–7 days) OR **Penicillin V potassium** (500mg, 4 times per day, 3–7 days)

Follow up after 3 days to assess for resolution of systemic signs and symptoms. Discontinue antibiotics 24 hours after complete resolution of systemic signs and symptoms.

† For patients with penicillin allergy, please refer to ADA guidelines for treatment recommendation[1].

*This document provides general guidance and does **not** apply to all clinical scenarios. Always assess the individual patient and use your clinical judgment. Refer to ADA guidelines for specific treatment recommendations, definitions, and resources[1].*

1. Lockhart PB, et al. JADA. 2019 Nov;150(11) :906-21.

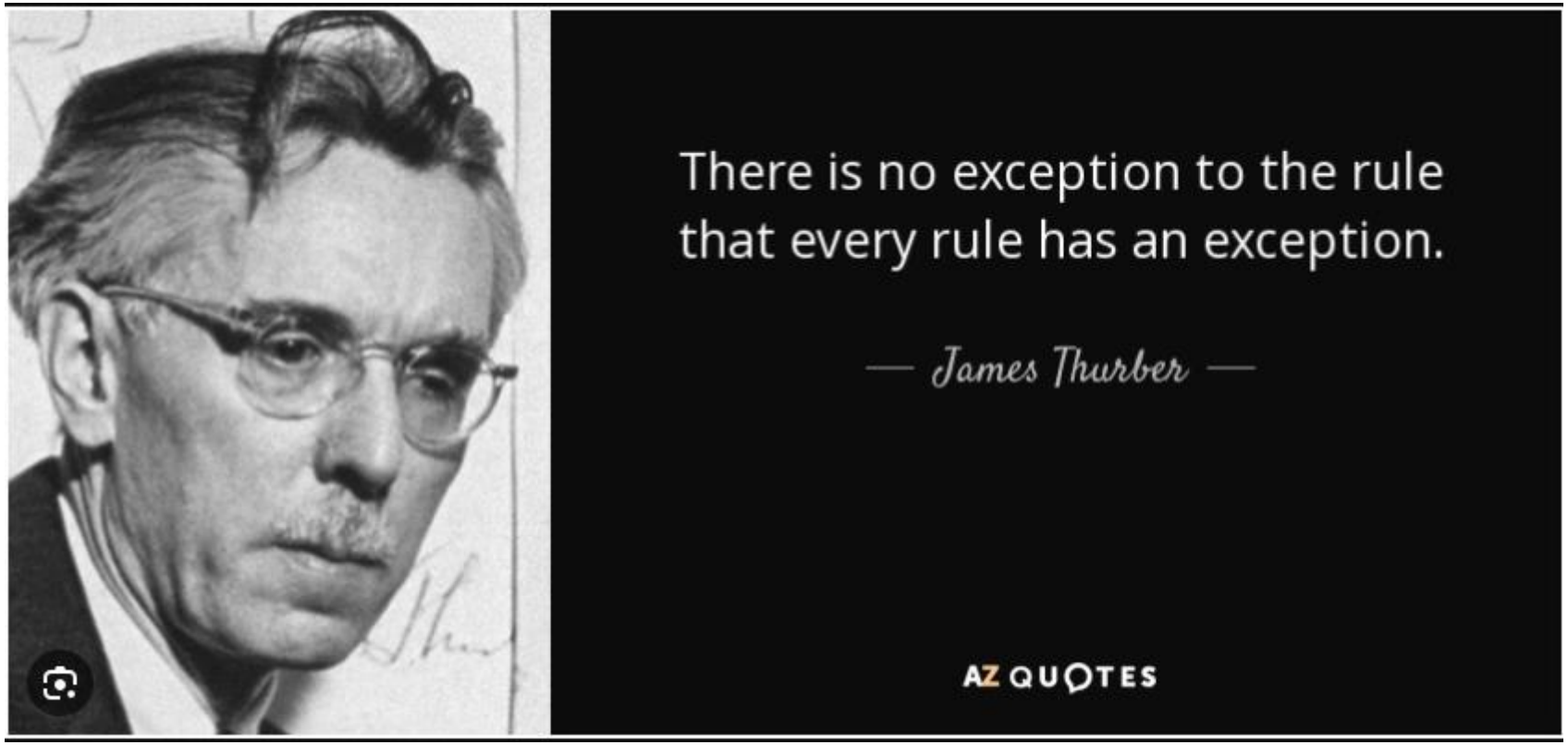
BE ANTIBIOTICS AWARE
SMART USE, BEST CARE

CDC

CS329314-A

https://www.cdc.gov/antibiotic-use/pdfs/ADA-treatment-guidelines-508.pdf

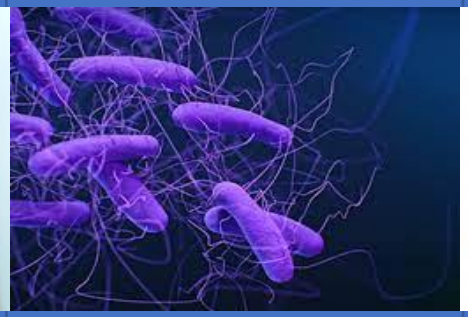
Antibiotic Durations



Longer Duration ≠ better care

Less antibiotic resistance 4% risk per day

Teshome BF et al. Pharmacotherapy 2019: 39(3): 261-70



Less C.difficile 9% risk per day

Chalmers JD et al. Journal of Infection 2016; 73(1):45-53

Less adverse effects 3% risk per 10 days

Tamma PD et al. JAMA internal medicine 2017: 177(9):1308-15

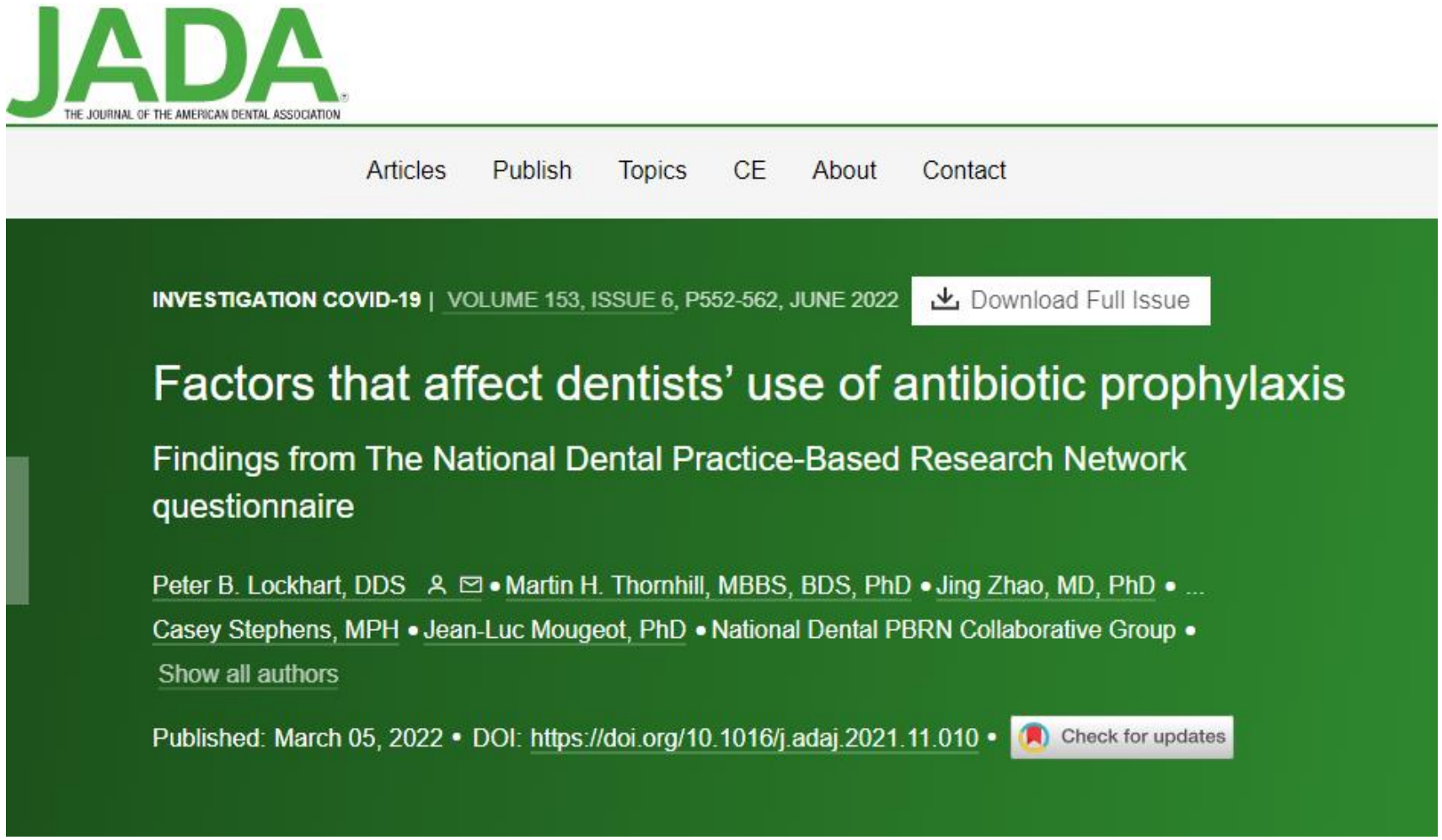
Antibiotic Prescribing for Dental Prophylaxis

- A 2019 systematic review in *JAMA* found that extended course (i.e., ≥72 hours) antibiotic prophylaxis may increase the risk of developing adverse events (e.g., diarrhea, nausea, rash, gastric pain, and fever) by 140% compared to short course (i.e., ≤24 hours) antibiotic prophylaxis.

- 80% of prophylactic antibiotics for dental procedures was inappropriate

Suda K, Calip G, Zhou J, et al. Assessment of the appropriateness of antibiotic prescriptions for infection prophylaxis before dental procedures, 2011 to 2015. JAMA network open. 2019;2(5): e193909-e.

Antibiotic Prescribing for Dental Prophylaxis



Antibiotic Prescribing for Dental Prophylaxis

Decisions influenced by:

- Official Guidelines
- Scientific literature
- Physician or specialist opinion

Concerns over prescribing:

- Development of infective endocarditis or prosthetic joint infections
- Litigation
- Patient's health

Antibiotic Prescribing for Dental Prophylaxis

- Goal: Avoid bacteremia and severe disease due to dental cleaning/procedures
- Two clinical reasons for prophylaxis historically
  - Cardiac conditions (prevent endocarditis)
  - Prosthetic Joints (prevent prosthetic joint infections)

Antibiotic Prophylaxis: American Heart Association

Prevention of infective endocarditis: Guideline from AHA (2008)

- Update of recommendations from 1997
- Changed recommendation to prophylaxis for only those at highest risk of adverse outcome from I.E.
- Amoxicillin recommended as first-line agent
  - If Penicillin allergy: cephalexin, clindamycin, azithromycin, or clarithromycin are recommended
  - In 2021-Clindamycin REMOVED from being an alternative

Wilson WR, Gewitz M, Lockhart PB, et al. Prevention of Viridans Group Streptococcal Infective Endocarditis: A Scientific Statement From the American Heart Association. Circulation 2021;143(20):e963-e78

Antibiotic Prophylaxis: American Heart Association

- I.E. is *more* likely to result from frequent exposure to random bacteremia's associated with daily activities than caused by a dental, GI tract, or genitourinary tract procedures.
- Prophylaxis may prevent an *exceedingly small number* of episodes of I.E. if any,.
- The risk of antibiotic-associated adverse events *exceeds* the benefit from prophylactic antibiotic therapy.
- Maintenance of oral health and hygiene may *reduce* the incidence of bacteremia from daily activities and is *more important* than prophylactic antibiotics in reducing the risk of I.E.

Wilson, et al. J Am Dent Assoc. 2008 Jan: 139 Suppl: 3S-24S
Wilson, et al. Circulation 2007: 116: 1738-1754

Antibiotic Prophylaxis: American Heart Association

- Prior to the published update in 2008, many patients with underlying cardiac conditions, such as mitral valve prolapse were recommended to receive prophylactic antibiotics prior to dental procedures.
    - What is a dental procedure?
        - Per the AHA, it is a procedure that involves manipulation of the gingival tissue or periapical region of the teeth or perforation of the oral mucosa

Prophylaxis in no longer recommended based solely on an increased lifetime risk of infective endocarditis.

Wilson, et al. J Am Dent Assoc. 2008 Jan: 139 Suppl: 3S-24S
Wilson, et al. Circulation 2007: 116: 1738-1754

Antibiotic Prophylaxis: American Heart Association

- Prophylaxis is NOT recommended for patients with MVP as the risks of antibiotic therapy outweigh any potential for benefit.

- Communication between patients with MVP, primary care clinicians, cardiologists, and dentists is critical.

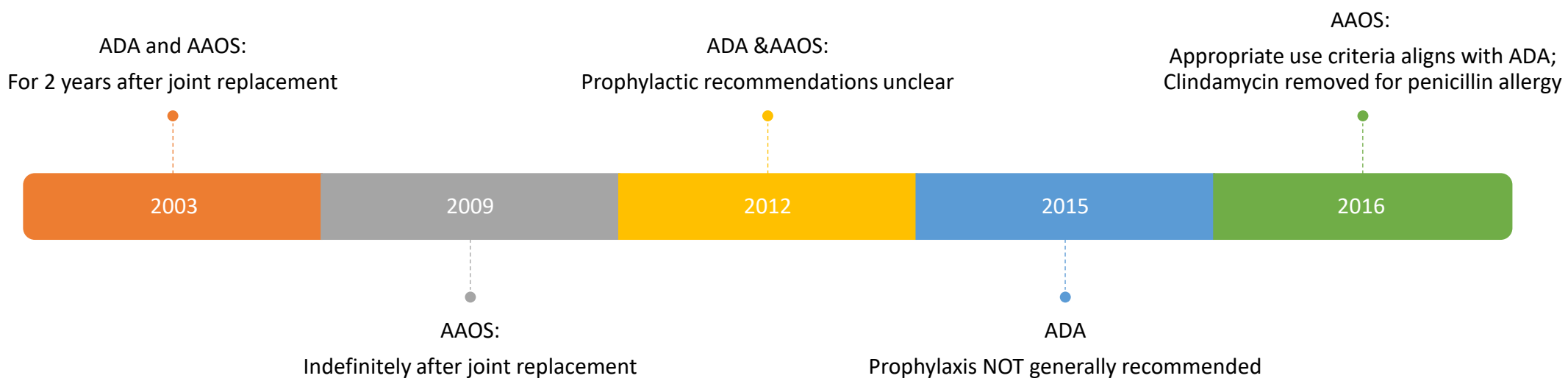
Wilson, et al. J Am Dent Assoc. 2008 Jan: 139 Suppl: 3S-24S
Wilson, et al. Circulation 2007: 116: 1738-1754

Antibiotic Prophylaxis: American Heart Association

- Prophylaxis is recommended with dental procedures in the following cardiac conditions:
  - **Prosthetic cardiac valve or prosthetic material used for cardiac valve repair**
  - **Previous infective endocarditis**
  - **Congenital heart disease**
    - Unrepaired cyanotic congenital heart defect
    - Repaired congenital heart defect with residual shunts or valvular regurgitation
  - **Cardiac transplantation recipients who develop cardiac valvulopathy**

Wilson, et al. J Am Dent Assoc. 2008 Jan: 139 Suppl: 3S-24S
Wilson, et al. Circulation 2007: 116: 1738-1754

Antibiotic Prophylaxis in Patient with Prosthetic Joints



2016 Antibiotic Prophylaxis Guidance

- For patients with prosthetic joint implants, prophylactic antibiotics are not recommended before dental procedures to prevent prosthetic joint infection. This clinical recommendation should be integrated with the practitioner's professional judgment and the patient's needs and preferences.

- Evidence fails to demonstrate an association between dental procedures and prosthetic joint infection or any effectiveness for antibiotic prophylaxis. When also considering the potential harm from antibiotic use, using antibiotics before dental procedures is not recommended to prevent prosthetic joint infection.

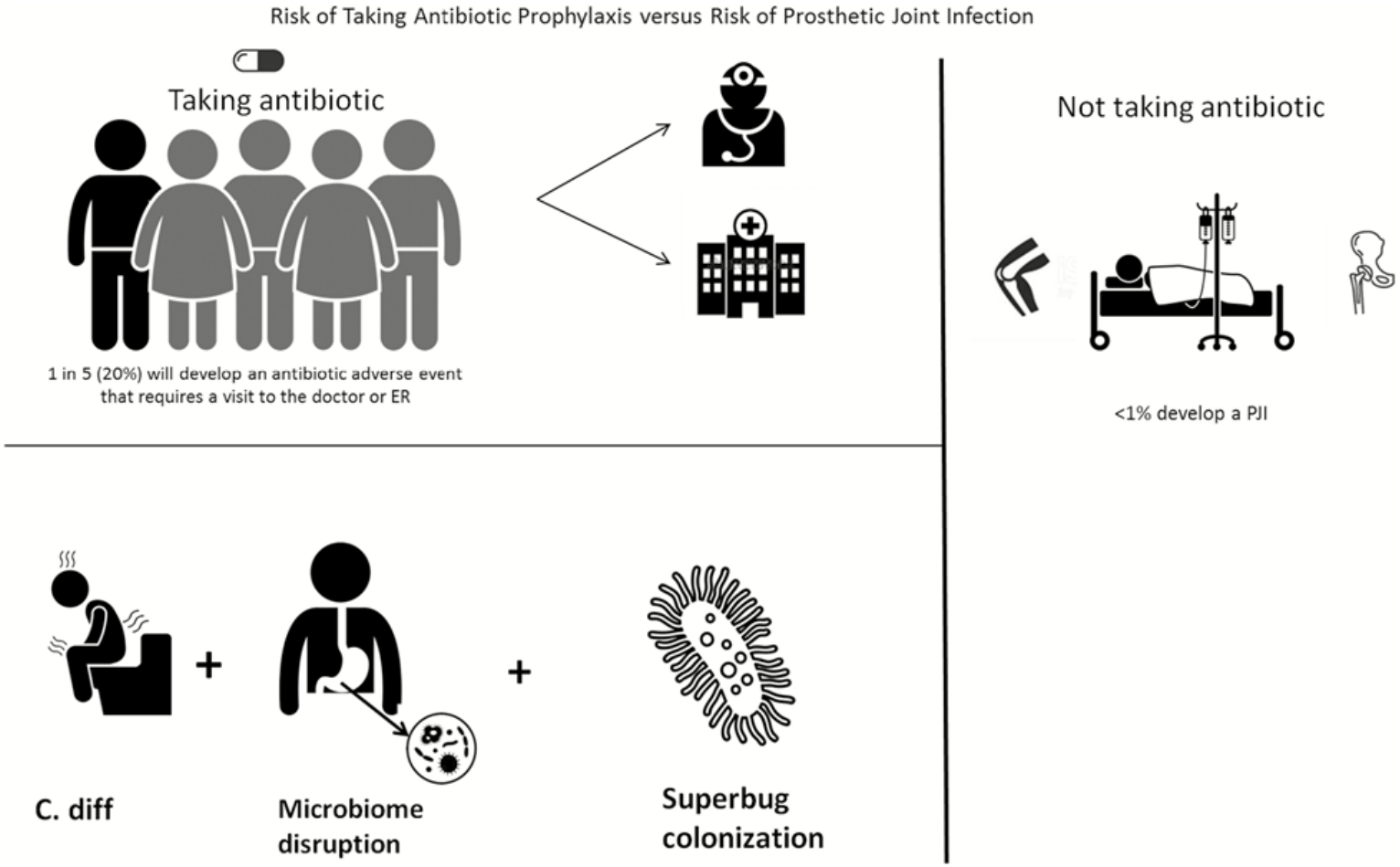
Sollecito, et al J Am Dent Assoc. 2015 Jan: 146(10): 11-16

Appropriate Antibiotic Prophylaxis

- AAOS and ADA agree AP for HIGH risk patients
  - High Risk includes:
    - AIDS
    - Cancer
    - Rheumatoid Arthritis
    - Inherited immune deficiency diseases

Sollecito, et al J Am Dent Assoc. 2015 Jan: 146(10): 11-16

A Collaborative Approach to Care is Recommended



Clin Infect Dis, Volume 71, Issue 2, 15 July 2020, Pages 455–462,
https://doi.org/10.1093/cid/ciz1118

American Association of Endodontists Guideline for Treatment of Traumatic Dental Injuries

Table 6: Treatment Guidelines for Avulsed Mature Permanent Teeth with Closed Apex (continued)

DIAGNOSIS & CLINICAL SITUATION	TOOTH HAS ALREADY BEEN REPLANTED	TOOTH HAS BEEN KEPT IN PHYSIOLOGIC STORAGE MEDIUM OR OSMOLALITY BALANCED MEDIUM (HBSS, SALINE, AND MILK) AND/OR STORED DRY FOR UP TO 60 MINUTES	EXTRA-ORAL DRY TIME > 60 MINUTES
ANTIBIOTICS	Prescribe systemic antibiotics: In patients <12 years old: amoxicillin for 7 days at appropriate dose for patient's age and weight. In patients >12 years old: doxycycline for 7 days, at appropriate dose for patient's age and weight. If the avulsed tooth has been in contact with soil, and if tetanus coverage is uncertain, refer to physician for a tetanus booster.		
PATIENT INSTRUCTIONS	Avoid participation in contact sports for at least 2 weeks. Soft diet for 2 weeks. Brush teeth with a soft toothbrush after each meal. Use a 0.12% chlorhexidine mouth rinse twice a day. Use a mouthguard for protection during contact sports.		
FOLLOW-UP	Splint removal and clinical and radiographic examination after 2 weeks. Clinical and radiographic examination at 4 weeks, 3 months, 6 months, 1 year and then yearly thereafter for 5 years.	Splint removal and clinical and radiographic examination after 2 weeks. Clinical and radiographic examination at 4 weeks, 3 months, 6 months, 1 year and then yearly thereafter for 5 years.	Splint removal and clinical and radiographic examination after 2 weeks. Clinical and radiographic examination at 4 weeks, 3 months, 6 months, 1 year and then yearly thereafter for 5 years. Ankylosis is unavoidable after delayed replantation and must be taken into consideration. In children and adolescents, ankylosis is frequently associated with infraposition. Careful follow-up is required and good communication is necessary to ensure the patient and guardian of this likely outcome. Decoronation may be necessary when infraposition (>1mm) is seen,

https://www.aae.org/specialty/wp-content/uploads/sites/2/2019/02/19_TraumaGuidelines.pdf

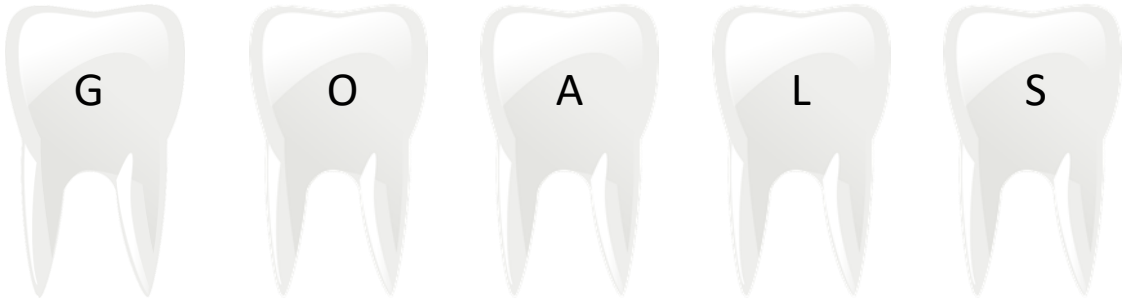
Antibiotic Stewardship in Action

Barriers to Stewardship

- Pressure from patients requesting antibiotics
- Failure to consider treatments other than systemic antibiotics
- Belief that broad-spectrum antibiotics are the most effective treatment
- Demands of running a busy practice
- Inadequate knowledge about management of infections (new guidelines)

Antimicrobial Stewardship in Dentistry

- GOALS
  - Help raise awareness
  - Prevent and control infections
  - Optimize the use of antibiotics



Antibiotic stewardship interventions in dental practice.

- Ponder patient conditions and look for a clear diagnosis before prescribing antibiotics; discuss with peers and other specialists if needed
- Follow updated and standardized guidelines
- Receive feedback on previous acts of antibiotic prescribing
- Warrant ongoing education and appropriate training
- Educate the dental patient and establish good communication to ensure the patient will follow the correct instructions when taking antibiotics
- Audit how appropriately antimicrobials are prescribed

Checklist for Antibiotic Prescribing in Dentistry

Pretreatment

- ☐ Correctly diagnose an oral bacterial infection.
- ☐ Consider therapeutic management interventions, which may be sufficient to control a localized oral bacterial infection.
- ☐ Weigh potential benefits and risks (i.e., toxicity, allergy, adverse effects, *Clostridium difficile* infection) of antibiotics before prescribing.
- ☐ Prescribe antibiotics only for patients of record and only for bacterial infections you have been trained to treat. **Do not** prescribe antibiotics for oral viral infections, fungal infections, or ulcerations related to trauma or aphthae.
- ☐ Implement national antibiotic prophylaxis recommendations for the medical concerns for which guidelines exist (e.g., cardiac defects).
- ☐ Assess patients' medical history and conditions, pregnancy status, drug allergies, and potential for drug-drug interactions and adverse events, any of which may impact antibiotic selection.

Prescribing

- ☐ Ensure evidence-based antibiotic references are readily available during patient visits. **Avoid** prescribing based on non-evidence-based historical practices, patient demand, convenience, or pressure from colleagues.
- ☐ Make and document the diagnosis, treatment steps, and rationale for antibiotic use (if prescribed) in the patient chart.
- ☐ Prescribe only when clinical signs and symptoms of a bacterial infection suggest systemic immune response, such as fever or malaise along with local oral swelling.
- ☐ Revise empiric antibiotic regimens on the basis of patient progress and, if needed, culture results.
- ☐ Use the most targeted (narrow-spectrum) antibiotic for the shortest duration possible (2-3 days after the clinical signs and symptoms subside) for otherwise healthy patients.
- ☐ Discuss antibiotic use and prescribing protocols with referring specialists.

Patient Education

- ☐ Educate your patients to take antibiotics exactly as prescribed, take antibiotics prescribed only for them, and not to save antibiotics for future illness.

Staff Education

- ☐ Ensure staff members are trained in order to improve the probability of patient adherence to antibiotic prescriptions.

National Center for Emerging and Zoonotic Infectious Diseases
Division of Healthcare Quality Promotion
CDC
CS267105-1

https://www.cdc.gov/antibiotic-use/community/downloads/dental-fact-sheet-FINAL.pdf

Antibiotics and Liability

Take home points

- When prescribing antibiotics ask yourself
  - Does the patient truly need antibiotics?
  - What guideline am I following by prescribing or not prescribing antibiotics?
  - Did I document in the chart why I prescribed the antibiotic?
  - Did I use the most narrow antibiotic for this condition?

Thank you!

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