Difteri – en glemt sykdom?

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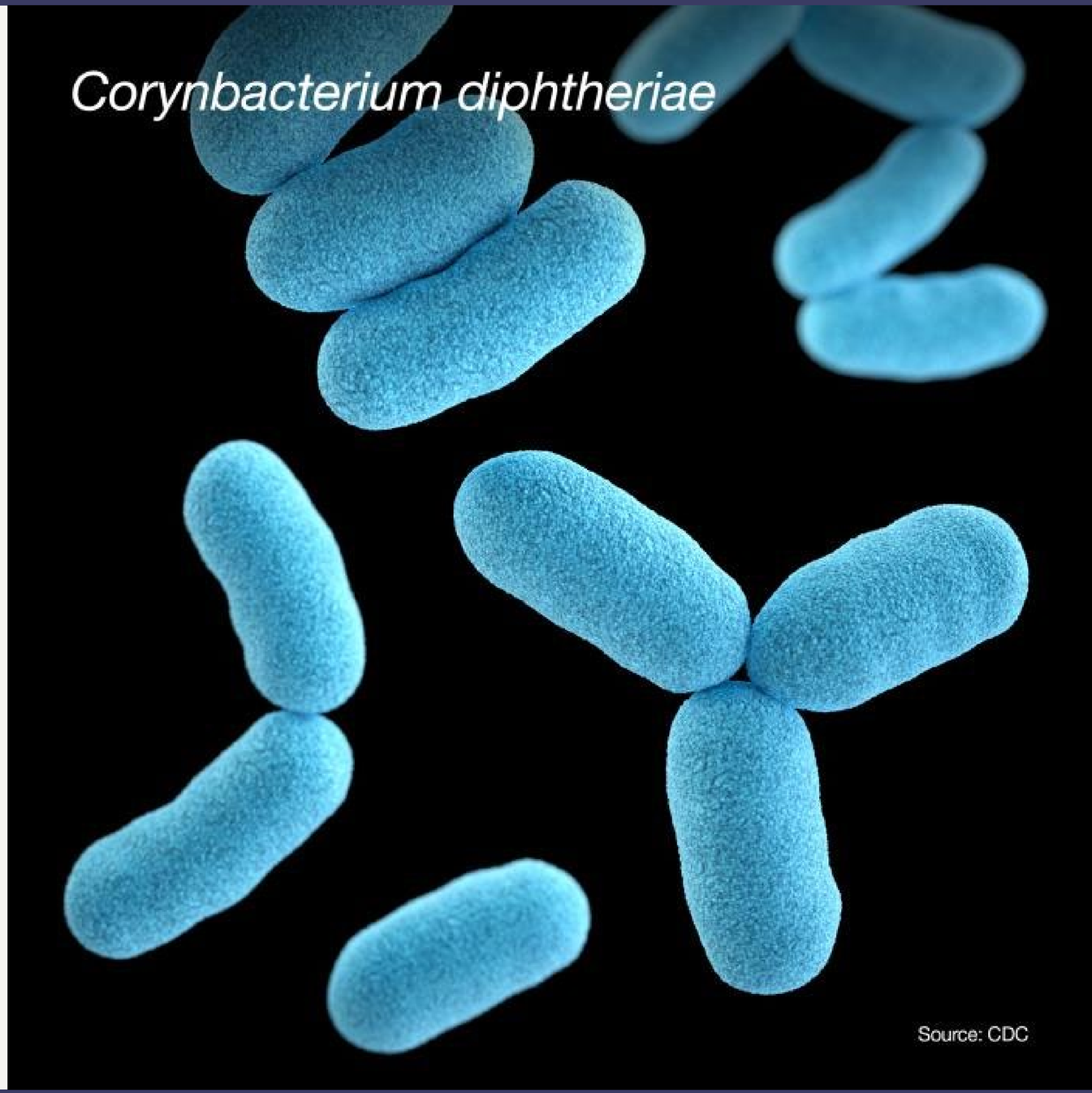
Overlege, Avdeling for smittevern og vaksine
Vaksinedagene, Oslo 8. November 2022

Disposisjon

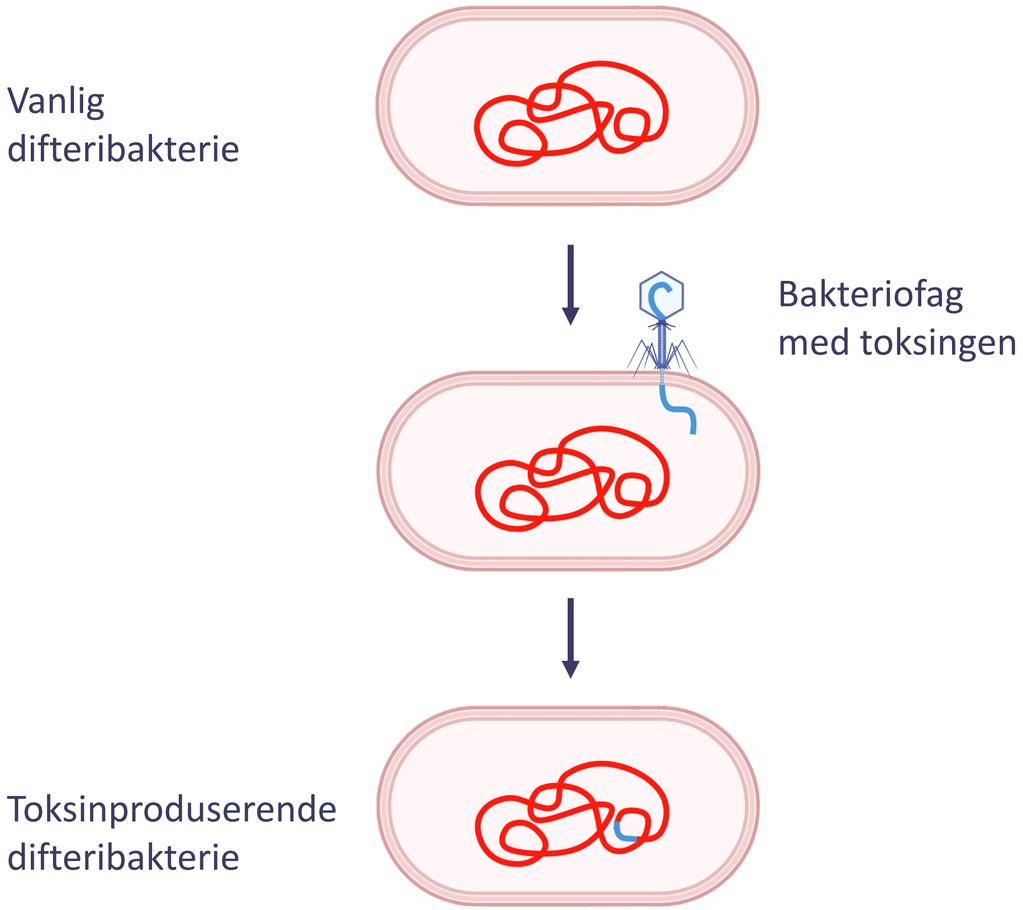
- Hva er difteri?
- Hvorfor snakker vi om difteri nå?



Hva er difteri?

Difteri skyldes infeksjon med toksin-produserende korynebakterier

- Forårsakes av *Corynebacterium diphtheriae*
  - I noen tilfeller *C.ulcerans*, *C.pseudotuberculosis)*
  - Kun toksinproduserende stammer gir alvorlig sykdom
- Dråpesmitte
  - Nær kontakt over tid
  - Smitte fra luftveier eller sårflater



Difteri kan være livstruende

- Vaksinerte sjeldent alvorlig syke
  - Asymptomatisk bærerskap
  - Huddifteri
- Halsdifteri (“ekte krupp”)
  - Feber, hoste, halsvondt og forstørrede lymfekjertler
  - Etterhvert lettblødende membraner på slimhinner
- Huddifteri
  - Hudinfeksjon - kroniske sår /brannskader
  - Ofte koinfisert med vanlige hudbakterier

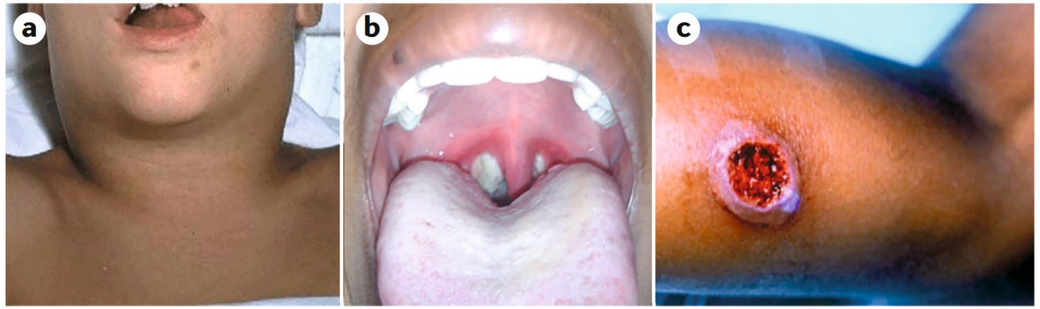


Fig. 4 | **Clinical presentations of diphtheria. a** | Characteristic bull neck caused by enlarged lymph nodes. **b** | Thick pseudomembrane in the posterior pharynx. The pseudomembrane is a layer of bacteria and debris from necrosis of the surrounding tissues due to diphtheria toxin. **c** | Cutaneous lesion caused by *Corynebacterium diphtheriae*.

Sharma, N.C., Efstratiou, A., Mokrousov, I. et al. Diphtheria. Nat Rev Dis Primers 5, 81 (2019).
Modifisert fra New Straits Times infografikk

Alvorlig difterisykdom må behandles akutt

- Motgift (antitoksin)
- Organstøttende behandling
- Antibiotika

Overlege Peter Hansen Aaser produserte fra 1895 difteriantitoksin fra hesteserum. *Foto: A.B. Wilse*

Antitoxin serum for diphtheria. Notice the hot pink fluff used to protect the glass ampule inside the wooden container.

http://americanhistory.si.edu/blog/2013/08/how-horses-helped-cure-diphtheria.html
https://commons.wikimedia.org/wiki/File:Diphtheria_antitoxin_horse.jpeg

Vaksinasjon beskytter godt mot alvorlig sykdom

- Over 90 % beskyttelse mot alvorlig difterisykdom
- Difterivaksine inngår i barnevaksinasjonsprogrammet
  - 3 doser første leveår
  - 1 dose 2.klasse
  - 1 dose 10.klasse
- Boosterdose anbefales voksne hvert 10. år
- Gjennomgått sykdom gir i noen tilfeller ikke varig beskyttelse

  → Anbefales vaksinasjon

https://www.sciencedirect.com/topics/immunology-and-microbiology/diphtheria-vaccine

Hvorfor snakker vi om difteri nå?

Flere rapporterte tilfeller av huddifteri i Norge i 2022 enn tidligere år

2012-2021

- 0-2 tilfeller per år
- Vanligvis reiserelatert
  - Ferie/besøk hos familie og venner
  - Undervaksinert reisende

2022

- 7 tilfeller per 7. november 2022
  - Mai: 1
  - August: 1
  - September: 5
- 6 av tilfellene blant flyktninger
  - Menn 20-30 år fra Afghanistan og Syria
  - Undervaksinert

Økning i antall rapporterte tilfeller også rapportert i andre land

Infection
https://doi.org/10.1007/s15010-022-01926-4

CASE REPORT

Check for updates

A case of fulminant respiratory diphtheria in a 24-year-old Afghan refugee in Austria in May 2022: a case report

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Abstract
Purpose Raising awareness of respiratory diphtheria and for the importance of early antitoxin administration.
Methods Report of a case of fulminant, imported respiratory diphtheria in an otherwise healthy 24-year-old Afghan refugee in Austria in May 2022.
Result This was the first case of respiratory diphtheria in Austria since 1993. Diphtheria antitoxin was administered at an already progressed disease stage. This delay contributed to a fulminant disease course with multiorgan failure and death.
Conclusion In high-income countries with low case numbers, awareness of respiratory diphtheria and for the importance of early antitoxin administration must be raised.

Keywords Toxin-producing *Corynebacterium diphtheriae* · Respiratory diphtheria · Austria · Afghan · Migration · Diphtheria antitoxin

SWI swissinfo.ch

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Swiss Politics

Cases of diphtheria reported in Switzerland

Several people have been infected with diphtheria at a centre for asylum seekers – the first known cases of the bacterial infection in Switzerland in nearly 40 years.

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Infectious diseases

Diphtheria outbreak confirmed at asylum seeker centre in Kent

'Very small' number of cases reported at Manston airfield, where about 3,000 people are staying in tents

Diane Taylor
Thu 20 Oct 2022 12.27 BST

People sleep close together on the ground at Manston, which was was originally designed for only 1,000 inhabitants. Photograph: Gareth Fuller/PA

Økt antall tilfeller av difteri rapportert i Europa i 2022

- Per 21. oktober 2022 rapportert om 125 tilfeller av difterisykdom i Europa
  - Under 20 tilfeller var halsdifteri
  - 1 dødsfall
- De fleste tilfeller blant flyktninger
  - Unge menn 20-30 år
  - Uvaksinerte eller undervaksinerte
  - Majoriteten fra Afghanistan og Syria

Figure 1. Number of diphtheria cases among migrants per week, by country, and date of reporting in 2022.

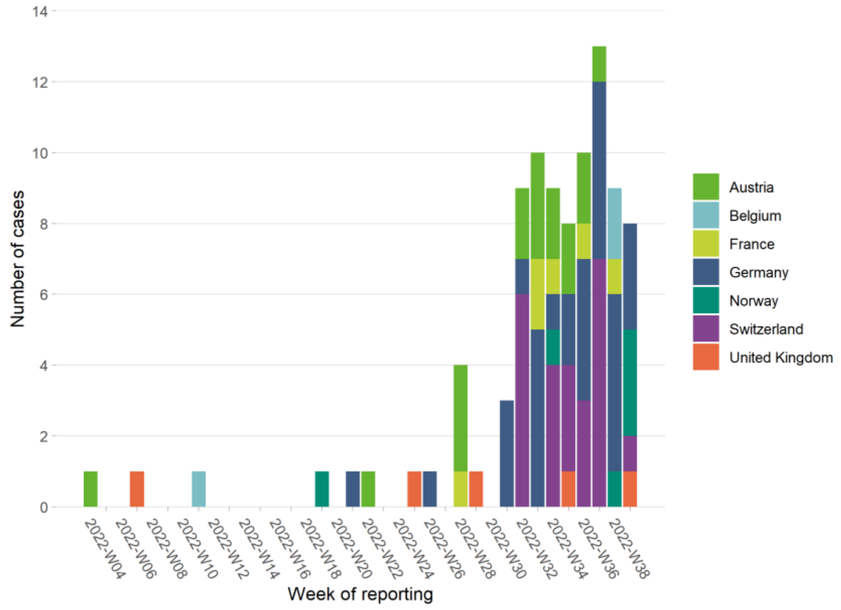
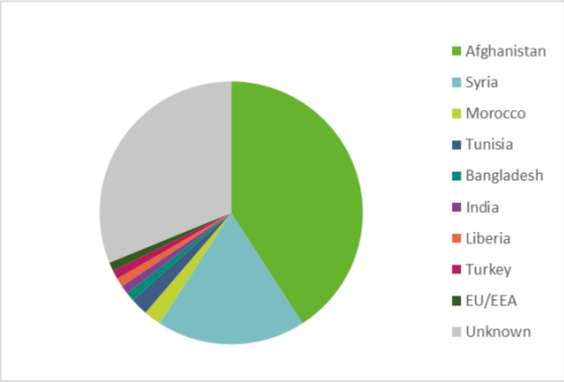


Figure 2. Nationality/country of origin among migrants with diphtheria for cases reported in 2022



ECDC Rapid risk assessment 6. October 2022

Hva gjør vi med dette?

Rapporterte tilfeller følges opp lokalt

- Behandling av den syke
- Smittesporing og oppfølging av nærkontakter

Økt årvåkenhet for å oppdage difteritilfeller og påminnelse om gjeldende vaksinasjonsanbefalinger

- Ankomstsentre i Norge
- Kommuneleger
- Mikrobiologiske laboratorier
- Vaksine-/Smitteverndagene
- Oppdaterte nettsider og nyhetsmelding fra FHI

RAPID RISK ASSESSMENT

Increase of reported diphtheria cases among migrants in Europe due to *Corynebacterium diphtheriae*, 2022

6 October 2022

Summary

As of 26 September 2022, 92 cases of diphtheria among migrants have been reported by seven European countries for the year 2022. Sixty-six of these cases presented with cutaneous diphtheria caused by *Corynebacterium diphtheriae*. Cases of respiratory diphtheria have also been reported, including one fatal case. The cases are among males, and most have been diagnosed in reception centres for migrants. Additionally, one case of cutaneous diphtheria was detected in a staff member at a reception centre in Switzerland. Most of the cases reported by EU/EEA countries and the UK in 2022, were infected by strains of *C. diphtheriae* for which toxin production was confirmed. For a limited number of cases, mainly in Switzerland, the toxigenicity has not been determined or reported.

Diphtheria is a rare disease in the EU/EEA. An average of 52 cases were annually reported across the EU/EEA to ECDC between 2016 and 2020. Around 50% of reported cases were caused by *Corynebacterium (C.) diphtheriae*. Of the 128 cases caused by *C. diphtheriae* reported between 2016-2020, 60 were cutaneous, 25 respiratory, and one had both a cutaneous and respiratory presentation. Forty-two cases had a different clinical manifestation or missed information about the clinical manifestation. During this five-year period, 69 *C. diphtheriae* cases were classified as imported in eleven EU/EEA countries (an average of 14 imported *C. diphtheriae* cases per year), and of these, 46 presented with a cutaneous disease. It was not possible to confirm the potential migratory status of these cases as their reason for travel to the EU/EEA was not reported.

The number of cases reported so far in 2022 represents an increase compared to the average number of imported cases seen in recent years. This increase could be explained by an increased volume of migrants from diphtheria-endemic countries, by an increased circulation of the pathogen in the countries of origin, or by an increased risk of transmission in specific settings such as migrant reception centres. As of 26 September 2022, ECDC is not aware of any evidence indicating outbreaks in the broader EU/EEA population resulting from the increased number of imported cases.

Suggested citation: European Centre for Disease Prevention and Control. Increase of reported diphtheria cases due to *Corynebacterium diphtheriae* among migrants in Europe – 6 October 2022. ECDC: Stockholm; 2022.

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Oppsummering

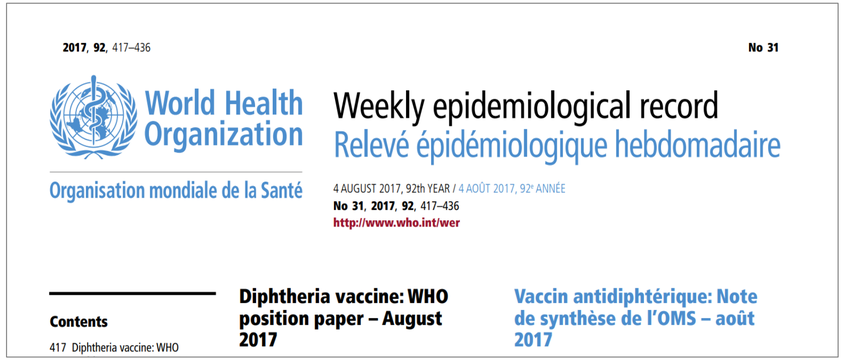
Difterisykdom fins fortsatt

- Høyere risiko blant undervaksinerte
- Vær obs og ha lav terskel for testing
- Tidlig behandling kan forebygge alvorlig sykdom

Vaksinasjon beskytter godt mot alvorlig difterisykdom

- Liten risiko for spredning av difteri i Norge pga høy vaksinasjonsdekning
- Vaksinebeskyttelsen svekkes over tid - boosterdose anbefales hvert 10.år
- Sjekk vaksinasjonsstatus hos nyankomne og tilby vaksine ved behov

Vil du vite mer?



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