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Date: 21/11/2023

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**Event:** *Burkholderia cenocepacia* novel cluster with suspected association with carbomer containing lubricating eye gel

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**Notified by:** HCAI, Fungal, AMR, AMU & Sepsis Division

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**Authorised by:**

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[Incident017.Burkholderiacenocepacia.2023@ukhsa.gov.uk](mailto:Incident017.Burkholderiacenocepacia.2023@ukhsa.gov.uk)

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**IRP Level:** Standard

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**Summary:**

UKHSA is investigating a novel cluster of *Burkholderia cenocepacia* involving 20 cases across the UK. Of these cases, 12 (60%) are male, 18 (90%) are adults and two are paediatric patients (age range 6 weeks - 82 years, median 57 years). 14/20 (70%) were critical care inpatients. Two patients have cystic fibrosis (CF). Preliminary epidemiological and microbiological investigations have identified a potential association with carbomer containing lubricating eye gel, though investigations are ongoing and these findings are not conclusive.

As a precautionary measure, and until further information is available, it is recommended that carbomer containing eye gels are avoided where possible in the following groups: individuals with CF; critical care inpatients; severely immunocompromised inpatients; and patients awaiting lung transplantation. UKHSA is working with NHS England and CF expert stakeholders to issue communications directly to CF patients, who will be directed to their CF Treatment Centres for further clinical advice.

The target audience for cascade includes: NHS and private sector adult and paediatric (including neonatal) critical care clinicians; cystic fibrosis clinical networks; lung transplant centres; NHS and private sector Directors of Infection, Prevention and Control; NHS antimicrobial pharmacy networks; and NHS and private sector Infectious Diseases and Microbiology Clinical Leads Laboratory Operations Managers in NHS and private sector diagnostic laboratories.

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**Background and Interpretation:**

*Burkholderia cenocepacia* is one species in the *Burkholderia cepacia* complex (Bcc). The Bcc group are commonly found in natural environments and are opportunistic pathogens, very rarely causing infection in healthy individuals. However, Bcc can cause severe infections in individuals with cystic fibrosis (CF), people who are immunocompromised or on intensive care. Presence of *B. cenocepacia* can be a contraindication to lung transplantation in some circumstances. Bcc are naturally resistant to a range of biocides and have been associated



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with contamination of medicinal and hygiene products used in health and care settings. UKHSA has previously investigated such outbreaks as Standard and Enhanced incidents during 2020-2022 e.g., Briefing Note 10 November 2021 (2021/081) related to contaminated ultrasound gel.

Information from the ongoing investigation (preliminary findings) is being shared at this stage to mitigate potential risks to potentially higher risk groups including individuals with CF, critical care inpatients, severely immunocompromised inpatients, and patients awaiting lung transplantation. UKHSA is working with NHS England and CF expert stakeholders to issue communications directly to CF patients, who will be directed to their CF Treatment Centres for further clinical advice.

UKHSA is currently investigating a novel cluster of *B. cenocepacia* (allelic profile \*15,11,184,143,11,6,79, where the \*15 indicates a novel allele closest to 15)). There are currently 20 confirmed cases (defined by typing profile and sequence type) identified from 12 different hospitals and the community, from multiple regions in England and Scotland. Cases have specimen dates between January-November 2023, the majority with specimen dates from October 2023 onwards (13, 65%).

*B. cenocepacia* has been isolated from the respiratory tract (14 cases, 70%), eye swabs (3 cases, 15%), blood culture (1, 5%), a wound swab (1, 5%) and a rectal swab (1, 5%). Where information is available, 5/11 (45%) of cases had clinically significant Bcc infection, the remainder were colonised/asymptomatic; to date there are no known attributable deaths.

Preliminary epidemiological and microbiological investigation has identified a potential association with carbomer containing lubricating eye gel. Investigation including confirmatory testing is ongoing and these findings are not conclusive at this stage. The Medicines and Healthcare products Regulatory Agency (MHRA) are investigating the potential association with products, will engage manufacturer(s), and will facilitate communications if any product recall is required.

Carbomer containing eye gels are used as lubricants to relieve or prevent eye dryness and soreness. Alternative non-carbomer containing eye lubricating products are available.

UKHSA will provide an update to this briefing note as the investigation progresses and as soon as any further pertinent information is available.

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### Implications & Recommendations for UKHSA Regions

UKHSA Regions are requested to use their DIPC, microbiology and laboratory networks to share information in this briefing note for further cascade.

UKHSA regional health protection teams will be informed by the HCAI, Fungal, AMR, AMU & Sepsis Division via the RCC inbox and their AMR lead when any confirmed cases are identified in their region and will be provided with information including questionnaires and template emails as required.

HPTs are asked to support investigation of confirmed cases by working with relevant NHS teams and community providers to:

- investigate potential exposures through completion of questionnaires
- facilitate collection of relevant products for sampling with UKHSA Food Water and Environmental (FWE) Microbiology laboratory service.

Clinical and related queries may be received from NHS sites in relation to this incident, please liaise with HCAI & AMR Division Incidents, Outbreaks and Stewardship (IOS) team as required via [HCAIAMR.IOS@ukhsa.gov.uk](mailto:HCAIAMR.IOS@ukhsa.gov.uk).



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## Implications & Recommendations for UKHSA sites and services

**UKHSA laboratories** are asked to submit any isolate from a new infection with *Burkholderia cepacia* complex, including any new isolations from individuals with cystic fibrosis, to the AMRHAI reference laboratory for identification

Other internal queries regarding this incident can be directed to the HCAI & AMR Division Incidents, Outbreaks and Stewardship (IOS) team via email at [HCAIAMR.IOS@ukhsa.gov.uk](mailto:HCAIAMR.IOS@ukhsa.gov.uk).

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## Implications & Recommendations for NHS

As a precautionary measure until further information is available, it is recommended that carbomer containing lubricating eye gels for dry eyes are avoided where possible in the following groups: individuals with CF; critical care inpatients; severely immunocompromised inpatients; and patients awaiting lung transplantation.

Clinicians managing patients in these groups should consider ceasing use of carbomer containing eye gels for patient care until further information is available. UKHSA are not able to recommend specific alternatives though non-carbomer containing lubricating products are available. See [Dry eye | Treatment summaries | BNF | NICE](#).

Standard IPC precautions are sufficient when managing patients colonised or infected with Bcc (see [National Infection Prevention and Control Manual](#)). CF centres should follow local guidelines.

**NHS Trusts and independent sector laboratories** are asked to be extra vigilant for this organism as it not a notifiable causative agent and to submit any isolate from a new infection with *Burkholderia cepacia* complex, including any new isolations from cystic fibrosis patients to the AMRHAI reference laboratory for identification and typing.

**NHS Trust and independent sector clinical teams** are asked to support the UKHSA investigation as required, including with completion of questionnaires and in securing products of interest for subsequent testing at the Food Water and Environmental Microbiology Laboratory, Porton Down if/as appropriate (arranged via the HPTs and the incident team).

If you need to contact UKHSA regarding content of this briefing note and/or with related queries, then please contact the HCAI & AMR Division Incidents, Outbreaks and Stewardship (IOS) team via email at [HCAIAMR.IOS@ukhsa.gov.uk](mailto:HCAIAMR.IOS@ukhsa.gov.uk).

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## Implications and recommendations for Local Authorities

No immediate action required

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## References/ Sources of information

[Dry eye | Treatment summaries | BNF | NICE](#)  
[Bacteriology reference department user manual](#)  
[National Infection Prevention and Control Manual](#)