

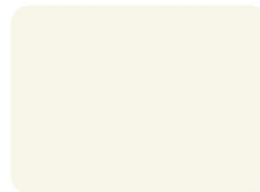
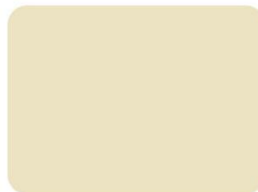
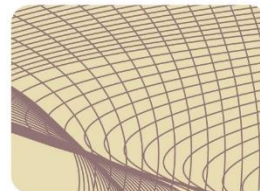
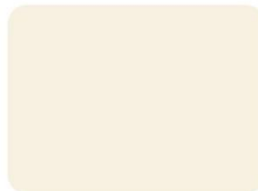
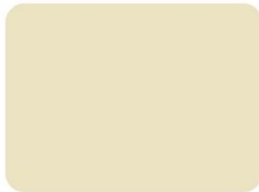
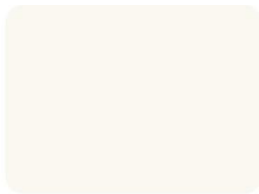
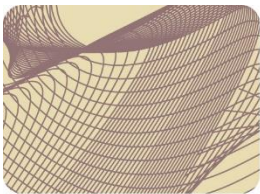


UK Health
Security
Agency

UK Standards for Microbiology Investigations

Review of users' comments received by Joint working group for syndromic algorithms

S 13 Painful and/or discharging ear



National Institute for Health and Care Excellence (NICE) has renewed accreditation of the process used by the UK Health Security Agency to produce UK Standards for Microbiology Investigations (UK SMIs). The renewed accreditation is valid until 30 June 2026 and applies to guidance produced using the processes described in 'UK Standards for Microbiology Investigations Development Process' (2021). The original accreditation term began on 1 July 2011.

This publication was created by UK Health Security Agency (UKHSA) in partnership with the partner organisations.

Recommendations are listed as ACCEPT/ PARTIAL ACCEPT/DEFER/ NONE or PENDING

Issued by the Standards Unit, Specialised Microbiology and Laboratories, UKHSA

RUC | S 13 | Issue no: 1 | Issue date: 05.06.24

Page: 1 of 12

4 Background

Comment number: 1

Date received: 27/12/2023

Laboratory or organisation name: UK Health Security Agency

It doesn't include occasional pathogens if the patient has been swimming e.g. coastal/sea/lakes/rivers. There is an increase in people going cold-water swimming for physical and mental well-being, so I think this should be included.
e.g. vibrio parahaemolyticus

Recommended action

1. Accept: Vibrio parahaemolyticus added to section '4.1.2 Acute diffuse otitis externa'

Comment number: 2

Date received: 05/01/2024

Laboratory or organisation name: Severn Infection Sciences and UKHSA SW

Outer ear infection is not 'caused' by eczema, for example, the list is of predisposing factors.

Recommended action

1. Accept: amendment made

Comment number: 3

Date received: 05/01/2024

Laboratory or organisation name: Severn Infection Sciences and UKHSA SW

General- consider HSV as cause of external ear infection- although I would say that, I'm a virologist.

Recommended action

1. Accept: table removed but replaced with summary paragraph in the background

4.1.2 Acute diffuse otitis externa

Comment number: 4

Date received: 12/01/2024

Laboratory or organisation name: Royal College of General Practitioners

1. The last sentence may be easier to read, if the sentence starts as: Conditions predisposing people to fungal otitis externa include
2. Does prior use of antibacterials (topical & oral) predispose to fungal OE?

Recommended action

1. Accept: sentence updated
2. Accept: sentence updated with 'previous use of topical antibiotics and steroids'

4.1.4 Necrotising otitis externa

Comment number: 5

Date received: 02/01/2024

Laboratory or organisation name: Countess of Chester NHS Trust

1. suggest rewriting sentence 'Pseudomonas aeruginosa is a common causative agent' to say 'Pseudomonas aeruginosa is much the most common causative agent, followed by S.aureus. If bacterial cultures cannot be obtained or are negative empiric treatment should be chosen to cover P.aeruginosa'. Your reference 3 (Rosenfeld et al) suggests covering both P.aeruginosa and staphylococci for empirical treatment so that might be considered.
2. suggest adding Aspergillus spp to Mucorales and adding Lomentospora to Scedosporium (here and later) as both S.apiospermum and L.prolificans can be involved, (as can Aspergillus more commonly and a range of yeasts)
3. suggest adding a risk of fungal necrotizing OE - estimated at no more than 5% (Hatch JL, Bauschard MJ, Nguyen SA, Lambert PR, Meyer TA, McRackan TR. Malignant Otitis Externa Outcomes: A Study of the University HealthSystem Consortium Database. Ann Otol Rhinol Laryngol. 2018 Aug;127(8):514-520. doi: 10.1177/0003489418778056)"

Recommended action

1. Accept: amendment made
2. Accept: amendment made, the following generic sentence was added to section 4.1.4 'Fungal infections are rare with infrequent case reports of Aspergillus, Candida and associated ascomycetous yeast, Mucorales, and Scedosporium species as causative agents'
3. Accept: amendment made and reference added

4.2.4 Otitis media with effusion

Comment number: 6

Date received: 05/01/2024

Laboratory or organisation name: Severn Infection Sciences and UKHSA SW

'In adults with significant lymphadenopathy enlargement, consider chronic viral infections, including human immunodeficiency virus (HIV).' A good point but not sure why it appears where it does, and it is sufficient just to say 'lymphadenopathy' as 'significant' is hard to define, and 'enlargement' is implied by the 'opathy' bit."

Recommended action

1. Accept: Sentence updated with a reference

Comment number: 7

Date received: 12/01/2024

Laboratory or organisation name: Royal College of General Practitioners

1. Instead of "adults with significant lymphadenopathy enlargement", it may be better to say, 'significant lymph node enlargement' or 'lymphadenopathy'
2. We are concerned that there is no mention of NICE guidelines to refer all CSOM (although those guidelines do not seem logical)"

Recommended action

1. Accept: Sentence updated with a reference
2. Accept: NICE reference added

4.3.1 Labyrinthitis

Comment number: 8

Date received: 02/01/2024

Laboratory or organisation name: Countess of Chester NHS Trust

'herpes simplex' rather than just 'herpes'

Recommended action

1. Accept: amendment made

Comment number: 9

Date received: 05/01/2024

Laboratory or organisation name: Severn Infection Sciences and UKHSA SW

Labyrinthitis caused by CMV and rubella- no need to change text as correct but was wondering if this refers to congenital infection- if so, helpful to state that.

Recommended action

1. Accept: amendment made

4.5 Treatment based on clinical judgment

Comment number: 10

Date received: 19/12/2023

Laboratory or organisation name: Southwest Pathology Services

Emphasis should be made on the importance of using electronic requesting systems and ensuring, if doing so, that OM and OE are clearly captured by the Order Comms system. defining the difference between acute OE and Om will inevitably guide the laboratory re. the production of antimicrobial susceptibility testing. This guidance fits nicely with good clinical governance and antimicrobial stewardship.

Recommended action

1. None: see section '6.4 Relevant clinical details needed on patient request forms when referring samples to the laboratory'.

Comment number: 11

Date received: 12/01/2024

Laboratory or organisation name: Royal College of General Practitioners

1. It is unclear for those who are following NICE Guidelines and therefore this needs further clarification.
2. Antibiotic use in this situation is a considered recommendation from NICE, along with other strategies such as no antibiotic or back-up antibiotic <https://www.nice.org.uk/guidance/ng91/resources/visual-summary-pdf-4787282702>
3. It may be more accurate to change "For otitis media antibiotics are used for children under 2 years with bilateral acute otitis media or any age with otorrhoea." to 'For otitis media antibiotics are considered particularly for children under 2 years etc.'
4. "Ear discharge (otorrhoea) is a relative contraindication to antibiotic treatment as the ear is spontaneously draining unless the patient is systemically unwell or immunocompromised." This statement seems to contradict the previous statement if it is referring to oral antibiotics. It is unclear as to which statement is correct. However, it is an interesting statement, and further clarification will be beneficial e.g. In the event of a child, under two who is systemically well and improving but has bilateral ear discharge and a history suggestive of OM. An

assumption as per NICE and the maximum opportunity to heal perforation is to give antibiotics, but the UKSMI statement implies no antibiotic needed.

Recommended action

1. Accept: amendment made, with reference to NICE guidelines
2. Accept: amendment made, with reference to NICE guidelines
3. Accept: amendment made, with reference to NICE guidelines
4. Accept: amendment made, with reference to NICE guidelines

5 Clinical presentations of painful and/or discharging ear

Comment number: 12

Date received: 27/12/2023

Laboratory or organisation name: UK Health Security Agency

It doesn't include occasional pathogens if the patient has been swimming e.g. coastal/sea/lakes/rivers. There is an increase in people going cold-water swimming for physical and mental well-being, so I think this should be included. e.g. vibrio parahaemolyticus

Recommended action

1. Accept: Vibrio parahaemolyticus added to section '4.1.2 Acute diffuse otitis externa'

5.1 Outer ear infections – Otitis Externa

Comment number: 13

Date received: 12/01/2024

Laboratory or organisation: Royal College of General Practitioners

Further clarity is needed regarding when and in what circumstances a GP should take a swab or scrapings.

Recommended action

1. None: see section '4.5 Treatment based on clinical judgment' for additional details, consult the guidelines provided by NICE.

7.2 Culture – Table 2: Investigation Table

Comment number: 14

Date received: 19/12/2023

Laboratory or organisation name: Southwest Pathology Services

1. Pseudomonas should be included as a target organism against necrotising otitis externa.
2. What about inner ear fluids? Are these to be treated as pus or deep wound specimens?

Recommended action

1. Accept: amendment made
2. Accept: amendment made, tissue fluids added to the specimen column

Comment number: 15

Date received: 27/12/2023

Laboratory or organisation name: UK Health Security Agency

Table 2 needs inclusion of TCBS/equivalent media to grow potential Vibrio spp.

Recommended action

1. None: reference to 'UK SMI ID 19 Identification of Vibrio and Aeromonas species' added to the 'Background' for information on the diagnosis

Comment number: 16

Date received: 28/12/2023

Laboratory or organisation name: NHS Lothian

The new table format is horrific. This has to be easy to interpret and this absolutely isn't. Please don't publish this. The old format is far better and much easier to follow. The authors have to remember that specimen processing and media selection are performed by unqualified MLA and BSWs

Recommended action

1. Accept: amendment made, table restructured and clarified.

Comment number: 17

Date received: 02/01/2024

Laboratory or organisation name: Countess of Chester NHS Trust

P.aeruginosa has not been listed as a 'top pathogen' in the external section which includes necrotising OE could refer to SMI ID17 re media for P.aeruginosa (though chocolate appropriate)

Recommended action

1. Accept: amendment made

Comment number: 18

Date received: 12/01/2024

Laboratory or organisation name: Institute of Biomedical Science

1. Fungi includes yeast and mould - Fungi can be isolated in both situations.
2. Also why not put up sabc on internal and external ear infection.

Recommended action

1. Accept: amendment made
2. Accept: amendment made

8.1.1 Reporting microscopy - Fungal stain

Comment number: 19

Date received: 12/01/2024

Laboratory or organisation name: Institute of Biomedical Science

1. Differentiate between yeast and mould hyphae. Certain yeast produce true hyphae.
2. Notes paragraph: "The presence of broad, aseptate or pauci-septate hyphae with wide-angle branching is consistent with Mucorales. The presence of regularly septate hyphae with 45° branching is consistent with Aspergillus spp but could represent other hyaline fungi such as Scedosporium spp"
45° should be 45°, as it reflects the branching angle of the hyphae rather than temperature.

Recommended action

1. Accept: amendment made
2. Accept: amendment made

9 Antimicrobial susceptibility testing

Comment number: 20

Date received: 19/12/2023

Laboratory or organisation name: Southwest Pathology Services

Rather weak! Appreciate that this will be driven by local guidelines but this is a unique opportunity to guide, at a national level, best practice and antimicrobial stewardship. At the very least suggest 'Topical agents as described in EUCAST guidelines' with an emphasis on quinolones or aminoglycosides. Also worth noting that aminoglycosides should NOT be used in patients with perforated ear drums!

Recommended action

1. None: amendments made as necessary, refer to EUCAST for additional details.

Comment number: 21

Date received: 12/01/2024

Laboratory or organisation name: Institute of Biomedical Science

Why just use EUCAST criteria? CLSI method for fungi is utilised

Recommended action

1. Accept: amendment made

Health benefits

Respondents were asked: Please state any health benefits, side effects or risks that might affect the implementation of this UK SMI?'

Comment number: 22

Date received: 05/01/2024

Laboratory or organisation name: Severn Infection Sciences and UKHSA SW

All SMIs are designed to improve patient outcome.

Recommended action

1. None

Comment number: 23

Date received: 09/01/2024

Laboratory or organisation name: Air Sentry Limited

If my comments are taken into consideration then there could be a significant reduction in surgical intervention for otitis media

Recommended action

1. None

Comment number: 24

Date received: 12/01/2024

Laboratory or organisation name: Royal College of General Practitioners

Useful reminder that mastoiditis is seen in children. Interesting information on early swabbing in hearing aids & ear pods users.

Recommended action

1. None

Financial barriers

Respondents were asked: Are there any potential organisational and financial barriers in applying the recommendations or conflict of interest?'

Comment number: 25

Date received: 09/01/2024

Laboratory or organisation name: Air Sentry Limited

UK Government External agencies operating GP surgeries Identification of training budgets for national campaign

Recommended action

1. None

New UK SMIs

Respondents were asked: Please suggest any new UK SMI that you would like us to develop.

Comment number: 26

Date received: 09/01/2024

Laboratory or organisation name: Air Sentry Limited

Ventilation and the use of Air Purification

link here <https://www.england.nhs.uk/publication/application-of-hepa-filter-devices-for-air-cleaning-in-healthcare-spaces-guidance-and-standards/>

As a contributor to the above, it has been very disappointing there has been establishment opposition to maintaining clean air within healthcare despite the potential to obtain energy savings in excess of £1.2Bn and HAI savings in excess >£1.8Bn. An SMI could significantly benefit health and carbon saving outcomes Furthermore the NHS currently risks being left behind and in a regulatory minefield due to the following: <https://standardsdevelopment.bsigroup.com/projects/9021-05970#/section>
BS40102 is likely to impact building note F, requiring air quality to be assessed
A human rights legislation currently transiting parliament is likely to increase litigation risk in the future <https://bills.parliament.uk/bills/3161>"

Recommended action

1. None: environmental testing is outside the scope of UK SMIs.

Improvement

Respondents were asked: Do you have any suggestions on how UK SMIs can be improved.

Comment number: 27

Date received: 12/01/2024

Laboratory or organisation name: Royal College of General Practitioners

There is no mention of (rare) inflammatory chondritis as a cause. This may lead to multiple courses of antibiotics unless considered.

Recommended action

1. Accept: amendment made to 'section 4.1 Outer ear infections – Otitis Externa'

Satisfaction

Respondents were asked: In general, how satisfied are you with the UK SMI service?

Comment number: 28

Date received: 28/12/2023

Laboratory or organisation name: NHS Lothian

Feel that many investigations suggested are not easy to implement in diagnostic labs. However, diagnostic labs also have to take responsibility for this as we aren't great at providing feedback

Recommended action

1. None: amendments made where appropriate

Respondents indicating they were happy with the contents of the document

Overall number of comments: 1			
Date received	04/01/2024	Lab name/Professional body (delete as applicable)	Registered Nurse working in Primary Care