

UK STANDARDS FOR MICROBIOLOGY INVESTIGATIONS (UK SMIs)

Setting the Standard for Laboratory Best Practice

What are UK SMIs?

UK Standards for Microbiology Investigations (UK SMIs) are a comprehensive referenced collection of recommended algorithms and procedures for clinical microbiology.

These standards have been developed since 1996 by dedicated working groups of experienced medical and scientific microbiologists from across the UKHSA, NHS and privately run diagnostic laboratories alongside staff from the UKHSA Standards Unit. Documents are evidence-based, incorporate best practice and reflect expert opinion, without commercial bias or emphasis.

The benefits of UK SMIs are that they ensure standardisation of procedures across all laboratories and are updated to adapt and respond to advancements in the field.

The full collection of published UK SMIs is freely accessible on the UK SMIs webpage hosted on the [Royal College of Pathologists \(RCPath\) website](#) since 2023.

Who are they for?

UK SMIs are used by three main groups:

- Practicing laboratory professionals
- Clinicians
- Commissioners of healthcare services in the UK

Practicing laboratory professionals use them as a general resource to provide a high-quality microbiology and virology service. UK SMIs can be used by clinicians, including primary care clinicians and GPs, to find out the service they can expect for their patients, as well as providing important information on ordering the appropriate tests on the correct specimen type and how specimens should be stored and transported prior to



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testing in the laboratory. This is particularly true since the recent development and introduction of syndromic UK SMIs.

Finally, commissioners of healthcare services can use UK SMIs to find the standard of microbiology investigations they can seek as part of the clinical and public health care package for their population.

UK SMIs are also an excellent resource for trainees and those revising for exams, particularly FRCPath Part 1 and Part 2. They contain useful nuggets of information that you may not come across day-to-day in a microbiology laboratory, such as biochemical tests that can be used for bacterial identification which are infrequently used in the days of widespread use of MALDI-TOF, or standardised comments for interpretation of syphilis tests.

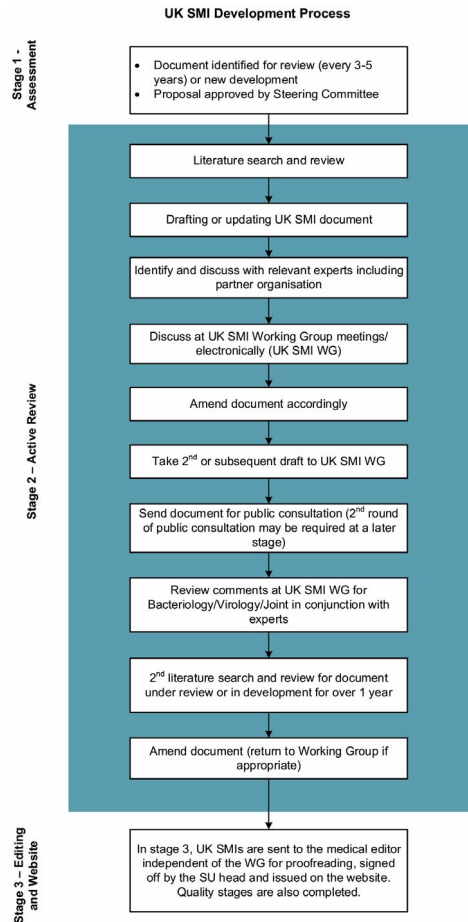
Why should I be interested in UK SMIs?

UK SMIs represent the standard of practice to which all clinical and public health microbiology laboratories in the UK are expected to work. They represent neither minimum standards of practice nor the highest level of complex laboratory investigation possible. Inspectors from the United Kingdom Accreditation Service (UKAS) auditing against ISO 15189 standards expect laboratories to follow procedures within UK SMIs, unless the laboratory has generated and recorded evidence showing that their alternative processes are acceptable. Therefore, if you work in an ISO 15189 accredited laboratory, you will need to be familiar with the most recent version of the documents and ensure your services are in line with them.

What is the process for their development and updating them?

The process of UK SMI development is accredited by UKAS to ISO 9001:2015. Every document follows a structured three-stage work flow overseen by the steering committee and working groups.

While the exact process can vary depending on the type of document for example, UK SMI Identification documents are usually electronically reviewed, and more complex documents may require subgroups – the general pathway remains the same. The summary flowchart below shows the three stages of UK SMI development.



What is the structure of the UK SMI Steering committee and working groups, and who represents LabMed on them?

There are over 20 professional societies that work in equal partnership to create UK SMIs, including the Association for Laboratory Medicine. You can check out the other partner organisations on the [UK SMI Development](#) page.

The Steering Committee oversees, advises and guides the activities of the UK SMI Working Groups and the development of standards. **Vasan Seshadri** is the LabMed representative on this committee.

The Working Group for Microbiology Standards in Clinical Bacteriology produces UK SMIs for investigation of different sample types for bacteria, parasites and fungi (documents prefixed with “B”), identification of medically important bacteria (documents prefixed “ID”) and testing procedures, such as biochemical tests and staining techniques (prefixed “TP”). **Penny Cliff** is the LabMed representative on this working group.

The Working Group for Microbiology Standards in Clinical Virology/Serology produces UK SMIs for virology and serology investigations, including those for some non-viral pathogens which are not routinely cultured such as *Chlamydia trachomatis*, and *Treponema pallidum* (documents prefixed with a “V”). **Kate Templeton** is the LabMed representative on this working group.

The Joint Working Group for the Development of Syndromic Documents has representatives from the Bacteriology and Virology Working Groups and is working on

developing syndromic documents (documents prefixed with an “S”).

Penny Cliff represents LabMed on this group.

Which UK SMIs are the most popular – and what’s new?

From January to July 2025, these were the top three most accessed documents on the RCPATH website:

- UK SMI B 41 – Investigation of urine, issue 8.7
- UK SMI B 11 – Investigation of swabs from skin and superficial soft tissue infections, issue 6.5
- UK SMI B 57 – Investigation of bronchoalveolar lavage, sputum and associated specimens, issue 3.5

Below are three of the most recently published documents that you might find useful:

- UK SMI ID 1: Introduction to the identification of medically important bacteria and fungi from culture
- UK SMI B 10: Investigation of faecal specimens for *Clostridioides difficile*
- UK SMI S 6: Infectious syndromes affecting the genitourinary tract and reproductive organs



How can I contribute and get involved?

We would love you to get involved! Sign up at the [RCPATH website](#) to receive email notification of documents open for consultation and the publication of new or updated UK SMIs. Why don't you respond to a consultation and get yourself some CPD credits along the way? If you feel too inexperienced, team up with someone more experienced than you, it can be a valuable learning process. If you see something in a UK SMI that you think is no longer correct, contact the [Standards Unit](#) – issues raised

will be discussed at working groups and updates made at the next scheduled review, or occasionally outside of the review cycle where appropriate. Are you an expert in the field? If so, you are welcome to offer your expertise by [emailing the Standards Unit](#). Your expression of interest will be recorded and the team will be in touch where appropriate to support the review of the relevant documents.

Finally, keep your eye on your inbox, LabMed will send emails when documents are open for consultation or have been published.

The screenshot shows the RCPATH website interface. At the top, there is a navigation bar with the RCPATH logo and text: "The Royal College of Pathologists Pathology: the science behind the cure". To the right of the logo are links for "UK regions", "International regions", "Venue hire", and "Log in to MyRCPATH". There is also a search bar with the text "Search the site" and a magnifying glass icon.

Below the navigation bar is a secondary menu with dropdowns for "Discover PATHOLOGY", "For TRAINEES", "For the PROFESSION", and "In your SPECIALIST AREA". To the right of these are links for "About the College" and "Document library".

The main content area has a breadcrumb trail: "HOMEPAGE > PROFESSION > PUBLICATIONS > UK STANDARDS FOR MICROBI...". The main heading is "UK Standards for Microbiology Investigations". Below this is a paragraph: "UK Standards for Microbiology Investigations (UK SMIs) are a comprehensive referenced collection of recommended algorithms and procedures for clinical microbiology. Our microbiology colleagues in Italy have kindly translated UK SMIs into Italian. To view the Italian translations, please visit the SIMPIOS website."

A red callout box contains the text: "For information regarding the ongoing update to all UK SMIs, please see the UK SMI News page."

Below this is a link: "For more information about the UK SMIs, please refer to our FAQ".

The next section is titled "UK SMI – Frequently Asked Questions" with a sub-date "DECEMBER 2024". It features a grid of nine categories, each with a representative image and a title:

- UK SMI News
- Bacteriology
- Virology
- Identification
- Quality-related guidance
- Syndromic documents
- Test procedures
- National user manual
- Withdrawn and recalled documents

On the right side of the page, there are three vertical panels:

- About UK SMI**: A purple panel with a molecular structure background. Text: "UK Standards for Microbiology Investigations (UK SMIs) are a comprehensive referenced collection of recommended algorithms and procedures for clinical microbiology."
- UK SMI Consultations**: A red panel with a molecular structure background. Text: "Each UK SMI will undergo a public consultation for a minimum of 2 weeks. New UK SMIs generally have two rounds of consultation and previously issued documents tend to have one unless significant changes are made during the development process."
- UK SMI Development**: A green panel with a molecular structure background. Text: "The UK SMI steering committee recommends and endorses ISO 9001:2015 certified microbiology standards. The committee oversees working groups, who are responsible for the laboratory clinical and public health input to the UK SMIs."

At the bottom right, there is a blue panel titled "Supporting scientific information for UK SMIs".