The Royal College of Pathologists
Pathology: the science behind the cure

Spending review 2025

Royal College of Pathologists' submission

In the NHS, pathology diagnostic services are involved in over 95% of patient pathways[1], making it central to a functioning health-care system.

- Screening, diagnosis, monitoring and treatment all heavily depend upon pathology services.
- Pathology services affect patients from birth to death. Important pathways, like cancer, need pathologists to detect, diagnose treat and monitor to ensure the best outcomes for patients.
- Capacity to correctly diagnosis is vital. Without it treatment cannot begin.
- The pathology workforce needs sustained investment to effectively meet the current and growing demand for its services.

There are not enough pathologists and scientists to enable services to be delivered safely, effectively and equally across the UK. Without appropriate workforce planning and investment, pathology becomes a bottleneck contributing to significant delays for patients.

Cellular pathology has major roles in cancer diagnosis. As well as initial diagnosis, cellular pathology is crucial in determining patient prognosis and treatment strategies, together with patient monitoring. Advances in and expansion of other specialties that use cellular pathology rarely lead to more resources for cellular pathology and other pathology services. All pathology disciplines are involved in cancer pathways.

Concerns

- The UK has a growing aging and increasingly sicker population, with rising levels of obesity and complex chronic diseases which is driving demand for clinical pathology services.
- The UK has a higher rate of cancer cases than Europe, on average, but proportionally fewer cancer healthcare staff and less equipment to treat patients. There are widespread shortages in histopathology. These are the pathologists who provide the definitive diagnosis for cancer.
- It can take 15 years plus to train a pathologist, we need a strong focus on retaining the existing, experienced workforce.

Asks

- There needs to be significant and sustained investment in modernising the pathology infrastructure, from digital pathology, AI and IT to the laboratory buildings.
- Funding for skilled IT support staff for laboratories is key to implement and maintain new systems and software needed in the future.

Investment in the pathology workforce

Pathology workforce numbers are dangerously low across the UK and some services have collapsed (e.g. paediatric pathology) or are on the verge of doing so (e.g. neuropathology, forensic pathology and immunology). Smaller specialties are particularly at risk and there needs to be national coordination and workforce planning to avoid them disappearing. Our data shows these issues will get significantly worse over the next decade.

The spending review needs to ensure resource spending for pathology, to allow the necessary expansion in consultant posts to safeguard patient care. Vacancy rates across our specialties range from around 15–30% and we expect this will continue to be a problem. When factoring in the increasing demand our members are experiencing, this significant shortfall needs to be met by increasing training places by around 150 across pathology specialties in England within 2 years.

Capital investment in pathology estate

Many pathology departments are in dilapidated buildings that are well-below the necessary standards to deliver safe and efficient services and safeguard staff wellbeing. Our members tell us they are not suitable for developments in digital technology and automation, and a lack of appropriate space for staff and facilities means that expansion of training opportunities for pathologists and scientists is unfeasible. In many cases, it is the direct cause for preventing expansion.

Urgent upgrade is needed to improve the estates – particularly for mortuary, blood sciences and genomic services – in the interests of patients.

Investment in pathology IT, digital, AI and automation

- Technology is key to modern, efficient, joined-up diagnostic pathology services, but many pathology services rely on antiquated technology. Pathology services urgently need to be modernised to allow more efficient, cost-effective processes and support digitisation, interoperability and standardisation.
- Wider use of digital, automation and AI has the capacity to make processes more efficient, increase productivity and enable easier sharing and incorporation into future electronic patient records. Some pathology services are already benefiting from new IT systems and the digital pathology roll out, but true interoperability and the efficiencies that this brings have rarely been achieved. There needs to be investment in the development of diagnostics and IT infrastructure to ensure the provision of accurate results for patients regardless of where they live. There is a

lack of investment both for implementation and the IT support staff needed (including pathology informaticians).

Digital pathology

The development of digital pathology systems to replace glass slides and microscopes in cellular pathology, haematology and other disciplines has revolutionised practice and enabled more efficient services to develop. But digital pathology rollout has been patchy and many areas have not benefited from these changes. Digital pathology development needs to be consistent across England to provide strong foundations for future developments in AI.

Capital investment also needs additional ongoing revenue budget allocation to cover the significant running costs including image storage (which are significantly larger than those required for other diagnostic specialties, such as radiology).

Diagnostic stewardship

Health professionals only requesting the tests a patient needs will be vital in the future to ensure that unnecessary testing does not impact pathology capacity and to prevent patients from further unnecessary interventions later. Functional IT systems which incorporate automated diagnostic stewardship will be important.

AI

Development and implementation of AI is challenged by the slow implementation of both digital pathology and pathology IT systems that are necessary for AI systems to function. AI will make systems more efficient, faster and more productive. In cellular pathology, there is at least one AI application for grading prostate tumours currently being trialled, and within blood sciences, AI algorithms are able to identify the right patients for specialist treatment, making patient pathways more efficient. The regulation and validation of AI needs to be driven and overseen by pathology professionals, with College involvement.

Contingency planning

Pathology services are increasingly at risk from cyber-attacks, infrastructure failure, supply chain issues and regulatory changes. The significant impacts of the cyber-attack in south-east London in June 2024 that knocked out pathology services are still affecting patient care.

Robust contingency plans need to be developed that incorporate ready-to-go, workable solutions for services that provide enough capacity and interoperability to facilitate service sustainability.

References

1. pathol-dig-first.pdf (england.nhs.uk)