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

World Patient Safety Day – Safeguarding young lives through pathology pathways

Dr Mike Eden, Clinical Director of Safety and Quality, reports on the College's World Patient Safety Day webinar.

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The College's webinar for World Patient Safety Day highlighted the critical importance of good data, strong specialist networks and guideline implementation in protecting the safety of paediatric patients.

On World Patient Safety Day, the College convened a webinar to examine how pathology practice, diagnostic pathways and professional guidance protect neonates and children. Chaired by Dr Mike Eden, Clinical Director of Safety and Quality at the College, the hour-long event was attended by over 200 participants.

College President, Dr Bernie Croal, and Vice Presidents, Professor Marta Cohen OBE and Dr Noha El Sakka OBE presented short case studies, identified system risks and set out practical steps to strengthen patient safety across paediatric and neonatal services. The full recording of the webinar is available on the College YouTube channel.

Pathology as a front-line safety discipline

The webinar explicitly aligned with the World Health Organization's 2025 theme, 'Safe care for every newborn and every child', and its slogan 'Patient safety from the start!' This global focus framed the College's local conversation; newborns and young children face distinct vulnerabilities that require age-adapted diagnostic pathways, rapid specialist input and systems designed to prevent avoidable harm.

The session began by affirming pathology as a front-line safety discipline. Every laboratory result, microscopic interpretation and written report can directly influence a clinician's decision and a child's outcome. In paediatrics and neonatology, the margin for error is narrow; delays, misinterpretation or miscommunication can have disproportionate consequences. The webinar used 3 case studies as the session's backbone to demonstrate examples of when things went well or what could be learnt when events did not go to plan.

Professor Marta Cohen opened with a challenging example that exposed how fragmented processes and lapses in oversight can cascade into avoidable harm. Failures in specimen labelling and handling, missed escalation and delayed paediatric pathology input were shown to produce diagnostic uncertainty and delayed treatment.

In contrast, Dr Bernie Croal and Dr Noha El Sakka described 2 positive cases – 1 from chemical pathology and 1 from microbiology – where explicit protocols, agreed turnaround times and interdisciplinary working enabled timely, accurate interpretation and safer clinical decisions. Together, the cases demonstrated that while individual diligence matters, robust systems and clear escalation routes are decisive in preventing harm.

Ensuring safety with specialist input and age-appropriate data

Workforce configuration and equitable access to specialist input dominated the discussion. Speakers emphasised that shortages of paediatric pathologists mean an increasing volume of paediatric material is reviewed by generalists. This shift creates specific risks around interpretation of age-dependent results and recognition of rare or subtle pathology.

Delegates explored practical mitigations: regional specialist networks, virtual multidisciplinary meetings, formalised referral pathways and targeted upskilling for general pathologists. Such arrangements, if instituted correctly, can preserve diagnostic quality and equity across regions by ensuring specialist expertise is available without reliance on ad hoc or informal mechanisms.

Age-appropriate interpretation and gaps in normative data were identified as persistent safety issues. Biochemical and haematological reference ranges evolve rapidly from pre-term infancy through childhood to adulthood, yet satisfactory datasets for many analytes in early life remain incomplete. Attendees urged laboratories to ensure IT systems apply and flag correct age-stratified intervals automatically, and to prioritise contribution to national datasets and collaborative research to close evidence gaps. Improved reference data reduces ambiguity in reporting and supports clinicians to make safer decisions during the most vulnerable phases of development.

Microbiology pathways for neonates prompted a focused, operational discussion. Accelerated negative blood culture protocols were proposed as a pragmatic safety intervention to enable earlier, evidence-based antibiotic reviews. Delegates illustrated how agreed sampling procedures, prioritised transport, dedicated processing slots and clear reporting templates reduce clinical uncertainty and unnecessary antimicrobial exposure. The group emphasised that effective neonatal antimicrobial stewardship relies as much on these operational enablers as on clinical decision-making.

Key threats to patient safety

The panel did not shy away from the system pressures that threaten patient safety. Rising demand, waiting-list backlogs and staff fatigue create environments where safety-critical tasks can be deprioritised. To counter this, speakers recommended explicit prioritisation frameworks so that paediatric and neonatal work with the highest clinical urgency is protected during service surges. Embedding safety into job plans, leadership objectives and local governance arrangements was presented as essential to make such prioritisation sustained and routine, rather than episodic.

External influences on safety were also discussed. Misinformation – most visibly around vaccination – was identified as an indirect but real hazard that undermines clinical decisions and public health. The College's role in producing clear, evidence-based communications informed by robust evidence was highlighted as central to countering misinformation and supporting clinicians, families and the public.

Concluding recommendations

The webinar concluded with practical, yearâround recommendations for services and leaders. College professional guidelines should be treated as active tools for local protocols, education and audit, rather than static publications. Services should develop and publish clear referral pathways and virtual access to specialists, implement laboratory IT solutions that enforce ageâappropriate reference ranges, and adopt accelerated neonatal culture pathways where clinically appropriate. Routine case reviews and constructive nearâmiss reporting can help inform system redesign. Improvement projects that demonstrate measurable benefit should be disseminated across networks.

Safeguarding children is an everyday, not an annual, endeavour. World Patient Safety Day provided a timely forum to spotlight pathology's distinctive contribution to paediatric safety and to translate caseâbased insight into practical solutions. Better data, stronger specialist networks, explicit prioritisation under tight timelines and consistent guideline implementation are all required to make diagnostic pathways safer for children every day of the year.

The College Patient Safety Steering Group will continue to coordinate priorities across specialties and champion practical interventions that demonstrably reduce risk for newborns and children. Members are encouraged to watch the webinar, submit local case studies and improvement work, and engage with College guidance, so that learning is rapidly shared and acted upon.

Meet the author

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