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Medical

Point-of-care testing is here to stay

Point-of-care testing may have been highlighted in Lord Carter's report on pathology but this is nothing new to those providing an important service across three counties in south-east England. Here, Lynda Petley provides a personal view of a trust-wide initiative.

"In line with the government's policy of providing services which are focused on the needs and wishes of patients, there is a growing trend towards point-of-care testing in pathology. Point-of-care testing may be located elsewhere within the hospital setting – in accident and emergency departments, critical care wards or out-patient departments, for example..."

The Medicines and Healthcare products Regulatory Agency (MHRA) recommends that formal arrangements are made for the local laboratory to manage and regulate point-of-care testing, but to date such arrangements have not been universally adopted across England."

The foregoing is an interesting observation taken from Lord Carter of Coles' report on pathology services in England, published in 2006.¹ From our experiences at Partnership Pathology Services, we regard it as essential for the future of pathology, and, ultimately, the quality of service delivered to the patient, that the local laboratory formally plays the leading role in point-of-care testing (POCT) around the trust. In order to address the issues surrounding the use of POCT devices, we created a dedicated POCT team which enables the adoption of a partnership approach between the pathology department and the users of the POCT equipment, to endeavour to reduce the risks inherent in this approach. We consider the two most essential aspects of effective POCT working to be results quality and patient safety. Our remit is to ensure good clinical

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governance and total quality management of the service, from selection of appropriate devices, through to delivery of the result by a trained, competent operator, which is where working partnerships and use of effective technology come to the fore.

Lord Carter observed that in many trusts the local laboratory is not formally taking the POCT lead. Frequently, the barrier to adopting new approaches can be resistance to change; however, the relentless march of technology leaves us no option but to embrace new ways of working. During my career I have witnessed many changes brought about by new technology that have profoundly altered the delivery of pathology services, and POCT is just a part of this constant striving to deliver the right result to the right person at the right time. According to politicians such as John Hutton MP, Minister of State for Health, 1999–2005: "Pathology is at the forefront of change in science and medicine". Indeed, with 60–70%² of NHS diagnoses relying on pathology results, it is our duty as biomedical scientists to ensure that clinicians can rely

on the information they receive, whether generated inside or outside the laboratory.

One thing that we must accept is that change is inevitable, and with the ever-growing plethora of POCT devices on the market we must embrace POCT as a vital extension to the pathology department's services. The fundamental role of the biomedical scientist has not changed in that the quality of the result remains the priority, it's just the method of achieving the result that is changing. We must continue to lead the way in science and medicine, implementing new ways of working with courage and optimism, rather than seeing new technology as a threat.

With such a key role to play in the medical decision-making process, pathology should not be immune to changing healthcare delivery pathways. Indeed, there are some situations in which access to pathology results may be the rate-limiting factor in the achievement of an efficient patient care pathway, particularly if results turnaround times delay clinical decision-making and follow-up consultations.² For this reason, in recent times, pathology departments have focused a great deal on laboratory automation and IT to accelerate services and reduce costs. However, these technologies alone may not provide a comprehensive solution, and a modern pathology service needs to consider a broad range of technologies to provide a more immediately responsive service for patients. This is where the clinician may turn to POCT.

ROLE OF PATHOLOGY IN POCT

Clinicians working in the primary care arena are increasingly being incentivised to take on chronic disease management. Point-of-care testing devices can facilitate the delivery of these services, relieving the burden on secondary care and offering a more patient-centred approach to chronic

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disease management. This opens up an opportunity for the pathology department to extend its traditional service by offering the essential training, competence checking, quality control, monitoring and device maintenance required to perform POCT correctly, producing trustworthy results and ultimately ensuring patient safety.

Consequently, relationship building and good communications are key to increasing the profile of pathology in the POCT environment. At Partnership Pathology Services, the POCT team is considered to be the 'face of the laboratory', actively demonstrating the expertise that is available within the pathology department. This enhances the reputation of the laboratory, the status of the biomedical scientist and also ensures quick access to an expert if additional advice is required. We regularly offer laboratory tours following a POCT training session in an effort to break down the 'ivory tower' image of the laboratory, which is a common viewpoint held by many healthcare professionals working on the wards.

ROLE OF POCT IN PATHOLOGY

Partnership Pathology Services serves three primary care trusts (PCTs) across three counties (Surrey, Hampshire and Berkshire), and with over 500 devices on our books the POCT team is kept busy. The administration of the POCT service would be prohibitively expensive if staffed by biomedical scientists alone, so we have developed a new skill-mix including trained unqualified staff. They provide maintenance, training and support for 24 different analyser types, producing results over a range of pathology testing. The team members are rarely in the office, spending the majority of their time 'at the point of care' where the service they provide and the relationships they develop combine to achieve a high-impact service. Moreover, we have a further remit to identify and implement additional POCT opportunities across the PCTs and the communities served by them. This is possible through our regular contact with clinical personnel.

In addition to the daily support that we offer for POCT devices and their users around the trust, we also add value by ensuring that the best technology possible is utilised by providing initial purchasing advice to clinicians. Once again we 'sell' our expertise in the POCT arena, as we research, evaluate and validate any device prior to purchase and use. Naturally, we will ensure that any proposed POCT device meets operational requirements such as ease of use, functionality and robustness. In addition,



Point-of-care testing analysers placed around the trust in a variety of locations have the required password-protected access and full audit trails.

we can offer knowledge of all current legislative requirements for POCT. For example, Clinical Pathology Accreditation (CPA) requirements state that all POCT analysers should be password protected to ensure only trained personnel have access, and full audit trails must be obtainable for patient safety purposes.

Of course, we know our limitations and recognise the fact that we cannot be in all places at once, which is where technology plays a key role. In order to comply with CPA requirements, we have adopted a new solution (Pentra Safe from Horiba Medical) that ensures the POCT haematology

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analysers (ABX Pentra 60C+) and chemistry analyser (ABX Pentra 400), which are placed around the trust in a variety of POCT locations, have the required password-protected access and full audit trails. This functionality is already available on our blood gas analysers (Radiometer) via Radiance software. These two software solutions also allow completely secure remote bidirectional communication from our laboratory, facilitating the management of the associated POCT devices from a central pathology laboratory site. The ability to monitor quality control (QC) performance and remotely view results in real time, to view consumables status and monitor user error all contribute to our ability to provide a quality managed service.

OPPORTUNITY TO INFLUENCE THE FUTURE OF POCT

Manufacturers have responded to clinical demand by offering an ever-increasing portfolio of devices, together with a growing menu of tests. Working with manufacturers during the development process allows us to influence the design of POCT devices. Our experiences gained over years of working 'out in the field' have developed our understanding of the problems encountered by the users, together with some exasperating disasters caused when the incompetent user meets the unintuitive device.

We approach any incidents as 'learning opportunities' and use the knowledge we have gained, together with our understanding of accreditation requirements, to lobby

manufacturers to produce intuitive devices, with bidirectional access, full audit trails and QC lockouts. We look forward to the day when technology can offer the foolproof device that recognises pre-analytical errors, takes into account interferences and errors in analysis, captures the result in the right format to interface with local and national IT requirements, and prompts the clinician to act accordingly. However, I expect I'll have retired long before then. ■

REFERENCES

- 1 Department of Health. *Report of the Review of NHS Pathology Services in England*. Chaired by Lord Carter of Coles. London: Department of Health, 2006.
- 2 Cramb R. *Guidelines on point-of-care testing*. London: The Royal College of Pathologists, October 2004.

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