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Editorial

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Laboratory demand management of repetitive testing – time for harmonisation and an evidenced based approach

In a time when laboratories are struggling to cope with increasing pressures on their services, and shrinking budgets demand management tools and strategies provide potential solutions. There are a number of areas where the laboratory is being squeezed including increasing workloads, increased costs, reduced revenue, inappropriate tests and changes in how their services are commissioned and delivered.

The pathology workload in the UK alone is increasing by an average of 10% every year and must be delivered despite a 20% reduction in pathology funding [1]. Workload has been increasing due to both increases in appropriate and inappropriate tests. Advances in laboratory technology have allowed multiple testing, more rapid turnaround times and more choice. With the advent of the worldwide web, patients are better informed and become advocates for their own investigations. The population is also getting older with more patients having chronic diseases, which require effective long-term management. Requestors are also more defensive in the way they request for fear of missing a test or a medico-legal consequence. Identifying the appropriate and inappropriate test is a challenge for the laboratory, but this in itself depends upon the perspective of the individual. A standardised approach and definition of an appropriate or inappropriate test is required to allow the laboratories to effectively manage each. In Australia, the National Coalition of Public Pathology Report (2012) presents a matrix that can be used to ascertain whether a request is appropriate or inappropriate, thereby bringing some standardisation to this difficult area [2].

Therefore, the laboratory must be proactive in effectively managing its workload in order to provide the best service for the patient within the defined constraints.

The ideal demand management strategy ensures that the right test is done on the right patient at the right time. It also provides an opportunity to harmonise processes and remove unnecessary waste thereby saving money.

A number of demand management solutions are available, which can assist the laboratory and can be grouped into five areas: education, rules aimed at restricting test requests, redesign of request forms, computerised physician order entry (CPOE) and reimbursement models [2]. Fryer and Smellie have recently published a demand management toolbox to assist laboratories in achieving effective workload management [3]. One solution that has already showed promise and sustainability are rules aimed at restricting tests based on time between repetitive tests [4, 5]. In this issue of the *Clinical Chemistry and Laboratory Medicine*, Janssens and Wasser discuss an example of this type of intervention, calculating the financial savings realised [6]. In partnership with hospital physicians “spare periods” (periods during which tests were barred) were produced and implemented through the laboratory information and management system (LIMS). Although the savings in this example were relatively low in proportion to their own pathology budget and previously published figures, they indicated that it should still be continued due to the minimum effort required to sustain it. A key step in such a solution is the partnership between the laboratory and the clinician using the service as demonstrated in this paper. What is sometimes lacking is the evidence to support an intervention particularly when barring tests, which from a user’s perspective may be thought to be necessary. The provision of and availability of individual tests may differ between laboratories with different demand management rules in place based on local practice and rarely published evidence or practice. To address some of the variance in practice and lack of evidence base, the Clinical Practice Section of the Association for Clinical Biochemistry (ACB) prepared a set of consensus/evidence based recommendations on when a test should be repeated [7]. The National Minimum Retesting Interval Project used a “state of the art” approach to prepare over 100 recommendations in a number of clinical areas [8]. Invited members working in small groups prepared recommendations, which when complete were then assessed by an independent reviewer before review by a panel of regional representatives. Where evidence

was lacking recommendations were prepared based on the consensus opinion of the panel. The final recommendations were then approved after a consultation period by the Executive of the ACB. Establishing a set of nationally agreed recommendations supports the work of existing harmonisation programmes and provides evidence for those who want to implement this type of demand management tool [9]. It may also be timely to propose that similar terminology is used when discussing and implementing such initiatives. For example, the following terms; repetitive frequency, spare period, duplicate period, repeat interval and minimal re-testing interval, have all been used to describe the minimum time before a test should be re-tested based on the properties of the test and the clinical situation in which it is used. To assist with those searching for evidence to support a demand management solution, I would propose that the term minimal re-testing interval be adopted as it has already been used by a number of organisations in laboratory medicine [2, 7].

When implementing a demand management tool it is important that the system used to manage a laboratory workload can correctly identify the patient and match requests with the patient's medical record. Ideally there should be one unique identifier used (e.g., NHS number in the UK), which will allow the LIMS to interrogate the patient's previous pathology result to allow identification of duplicate or inappropriate requests. If a subsequent request is blocked, then it is also important that there is real-time notification of a potential redundant test so that the requestor can make an informed choice on the clinical need of the test and if it is required to override the rule. It is important that there is a facility whereby the laboratory or requestor can record the reason for blocking a request or overriding the rule. The implementation of CPOE and order communication software provides a real opportunity for the laboratory to effectively manage their workload and meet the increasing demands of service. Janssens and Wasser have showed that their example of a demand management solution can be maintained with minimal support, but is effective in removing and reducing redundant testing thereby optimising the service for the patient and pathology.

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