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Opinion paper

Leveraging the real value of laboratory medicine with the value proposition

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ABSTRACT

Improving quality and patient safety, containing costs and delivering value-for-money are the key drivers of change in the delivery of healthcare and have stimulated a shift from an activity-based service to a service based on patient-outcomes. The delivery of an outcomes-based healthcare agenda requires that the real value of laboratory medicine to all stakeholders be understood, effectively defined and communicated. The value proposition of any product or service is the link between the provider and the needs of the customer describing the utility of the product or service in terms of benefit to the customer. The framework of a value proposition for laboratory medicine provides the core business case that drives key activities in the evolution and maintenance of high quality healthcare from research through to adoption and quality improvement in an established service. The framework of a value proposition for laboratory medicine is described. The content is endorsed by IFCC and WASPaLM.

1. Introduction

Improving quality and patient safety, containing costs and delivering value-for-money are the key drivers of change in the delivery of healthcare [1]. They have stimulated the call for a shift in the delivery of healthcare from an activity-based service to a service based on patient-outcomes [2]. These developments occur in an environment emphasising the need for a patient-centred focus of healthcare as well as providing a more integrated approach to health and social care [3].

While such aspirations and drivers are rightly focussed on individual patients and the requirements of the wider population, it is also important to recognise that they are shared with, and relevant to, a number of stakeholders representing the various clinical disciplines as well as the various individuals and organisations involved in policymaking, purchasing and delivering healthcare (Fig. 1). The complexity of providing healthcare services in relation to the expectations of each stakeholder, with particular attention to the contribution by laboratory medicine, is summarised in Appendix 1 of this document.

Currently the business models involved in the delivery of healthcare, including laboratory medicine, are primarily designed, managed, and executed in individual units or silos. Such units are driven by activity in their respective disciplines, as well as being managed according to performance metrics that match these disciplines – rather than the product of the clinical pathway, and the contribution of the stakeholders. Thus, in the case of laboratory medicine there is, primarily, a focus on the quality of analytical performance, volume of activity and cost of delivery. However, the central role of the laboratory medicine service is to deliver the results of investigations that enable clinicians and other stakeholders to make better decisions. Consequently, the real value of the laboratory medicine service is found in other silos, with the benefits appreciated by other stakeholders. More recently this approach has been explored with the more advanced diagnostic tests (e.g. molecular and genetic tests) with a trend from a volume based- to a more outcomes based approach to laboratory medicine [4].

In order to deliver an outcomes-based healthcare agenda the real value of the laboratory medicine service to all stakeholders has to be understood, effectively defined, communicated, and applied. This will only be fully appreciated through service delivery based on the adoption of a value proposition for laboratory medicine [5]. The content of this document has been endorsed by the Executive Board of the International

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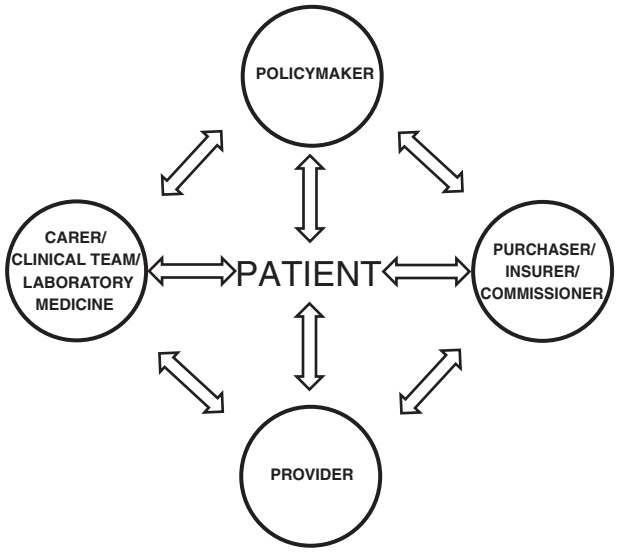

Fig. 1. The Stakeholder landscape in healthcare.

Federation of Clinical Chemistry and Laboratory Medicine (IFCC) and the Bureau of the World Association of Societies of Pathology and Laboratory Medicine (WASPaLM).

1.1. Background: making the case for a value proposition

Many clinical decisions made in caring for individual patients are facilitated by the results from laboratory medicine investigations. They can impact on the clinical outcome for patients, on the operational efficiency of the process of care, and the resources required for the delivery of that care. However, these objectives are compromised by a limited evidence base that demonstrates the utility and benefits of such investigations, as well as paying insufficient attention to ensuring that the laboratory medicine services are fully integrated into the care pathway – and consequently utilised efficiently.

Quality improvement in laboratory medicine embraces a number of activities, including (i) quality control and external quality assurance, (ii) audit, (iii) performance management, and (iv) strategic planning at both the service purchasing and service provision levels. However, quality improvement tends to focus on the analytical aspects of the laboratory service rather than considering the whole patient care pathway including the pre- and post-analytical phases. This focus may, in part, help explain the higher prevalence of pre- and post-analytical errors compared to analytical errors that is commonly reported [6]. Other quality improvement initiatives include analysis of frequency of testing [7], adherence to guidelines [8], and consensus guidance on appropriateness of laboratory test utilisation [9]. However, few of these initiatives have investigated the use of the test result in relation to patient outcome or operational and resource utilisation metrics. Resolution of many of the pre- and post-analytical problems and accepting greater accountability within the patient care pathway and outcome will only be achieved by working as a member of the clinical team.

Quality improvement also embraces innovation and it is recognised that there are often barriers to adoption of new technologies in healthcare. They include (i) poor understanding of the problem or unmet need, (ii) limited evidence of clinical and/or cost effectiveness, (iii) financial reimbursement, (iv) budgeting within disciplines, (v) disinvestment in redundant procedures following adoption of new technology and/or process, and (vi) lack of planning – a symptom of the lack of an innovation culture [10]. Successful innovation is disruptive, involves change and should be patient-centred [11].

The laboratory medicine service is presently an example of the fee-for-service (or cost-per-test) business model [12]. Laboratory medicine can only contribute to the outcome- and value-based agendas through adoption of the concept of a value proposition for individual test utilities, embedded in the overall healthcare service specification. This should be developed on the basis of evidence of impact on clinical, operational and resource outcomes, and in the context of a patient-centred care pathway.

1.2. The value proposition for laboratory medicine

Value has been described as "the regard that something is held to deserve" [13]. In healthcare it is described as "outcomes relative to costs" [14]. While this is an economic perspective, and its use is most appropriate for the policymaker as the patient's advocate, it hides the fact that healthcare is delivered through the work of a team of stakeholders each of whom have their own responsibilities (and accountabilities) with regard to outcomes and costs.

The value proposition of any product or service is the link between the provider and the needs of the customer. It describes the utility of the product or service in terms of benefit to the customer. The value proposition comprises (i) the unmet clinical need, (ii) the nature of the service, (iii) the potential benefits of the product or service, and (iv) the evidence to demonstrate that the benefit claimed can be achieved [5]. It is complemented by an implementation plan and performance management programme.

The customer values the resolution of a problem or the service provided to meet an unmet need, which can be defined in terms of clinical, operational and economic (resource) outcomes. In healthcare, while the patient is the ultimate and most important customer, all stakeholders can also be considered as customers (Fig. 1). Thus while laboratory medicine may provide a service that directly impacts a patient, typically it offers benefits to other stakeholders as well, e.g., carers, healthcare providers, those purchasing healthcare services and policymakers. Typically, the delivery of a laboratory test result, of itself, will not deliver any benefit; the value of laboratory medicine can only be considered in the context of the element of the care pathway in which the test is used. In other words, a particular action has to be taken on receipt of the result.

Therefore, the value proposition for laboratory medicine (whether it be overall service or individual test utility) is expressed in terms of contributions to guide decision making in clinical care, the process of the care delivered and the resource required to deliver that care. It is a comprehensive and practical tool for the application of Evidence-Based Laboratory Medicine (EBLM) [15,16].

A key aspect of the value proposition is taking into consideration the expectations of all stakeholders. Such teamwork can be described in terms of a customer-client relationship matrix involving each stakeholder with regard to what they expect to deliver and what they expect to receive (Fig. 1). It has been argued that focussing on value may be the most effective approach to bring stakeholders together and may provide the greatest opportunity for laboratory medicine to truly join the clinical team [17].

The framework of a value proposition provides the core business case that drives a number of key activities in the evolution and maintenance of high quality healthcare from research that stimulates the innovation cycle through to adoption and quality improvement in an established service – from problem to solution. A method for developing the value proposition is presented in Appendix 2 to this paper. The early steps in the framework reflect the EBLM cycle [15].

2. Conclusions

If one accepts the arguments for the need to move towards a more outcome-based and value-based approach to healthcare, then the value of all contributors to healthcare needs to be demonstrated and recognised, as well as becoming the basis on which healthcare is resourced, organised and delivered. The key objective of laboratory medicine is to contribute to guiding decision making that ensures the