



Patient-centered laboratory medicine – How laboratory testing impacts on outcomes

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Clinical laboratory workers believe that the work they perform in providing laboratory tests is valuable. However, data to validate this has been limited, and evidence of the contribution of laboratory medicine to the overall process of diagnosis and management is not easy to obtain. Many articles and presentations seeking to promote the value of laboratory medicine have made use of what has become known as the "70% claim". This is presented in various forms, most commonly that "Laboratory Medicine influences 70% of clinical decisions", or minor variations around this figure. However, the data on which this estimate was based represents unpublished studies and anecdotal observations, and cannot now be objectively verified. In addition, much of the evidence relating to the value of laboratory medicine is poorly structured and does not relate to clinical outcomes.

This presentation will discuss the definition of value and what that means for individual patients. It will define relevant outcomes (clinical, operational and patient-centered) and indicate how laboratory testing relates to outcomes. The problems with obtaining evidence of value and assessing outcomes will be discussed with examples, focussed specifically on diagnostic error, which has been described as the next frontier for laboratory medicine (Plebani & Lippi). The contribution of laboratory medicine to diagnostic error will be analysed, with specific reference to pre- and post-analytical factors, and the presentation will offer a vision of a future state in which laboratory medicine is used effectively to reduce diagnostic error, support patient care and enhance patient safety, based on better laboratory utilisation, effective help with interpretation and critical result communication. Laboratory medicine has much to offer, but can cause adverse outcomes if not properly used. Value is maximized by increasing the delivered benefits and reducing the harm caused by misconceived or misapplied testing. As laboratorians, we need to refocus our attention onto improving outcomes and develop a more rigorous approach to outcome assessment for the work we do.