Beyond economic value: putting patients at the centre of precision healthcare

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Innovations are sought that increase the quality of care, as measured by clinical outcomes, whilst reducing costs and saving resources. Innovations come in many forms and increasingly their impact on care pathways is particularly dependent on selecting the most appropriate point of intervention. Integrated Medicines Ltd (IML) has taken its experience of working with industry stakeholders, notably establishing the economic value of relationships between pharmaceutical and diagnostic companies, to develop care pathway simulations that articulate economic-, clinical- and resource-benefits to additional stakeholders such as regulators, payers, clinicians and patients. As an exemplification of this approach, IML developed baseline care pathways for bacterial sepsis through examination of patient records and discussions with NHS Trust clinicians, hospital biochemists and diagnostic test providers, and then super-imposed on this baseline a series of assumptions that generated an alternate pathway aided by innovation. Thus, a point-of-care test for procalcitonin utilized in Emergency Departments showed a potential reduction in mortality (25% to 15%), a reduction in per patient costs (£11,500 to £9,000) and a reduction in length of stay (8 days to 6.5 days) as a result of earlier, more accurate diagnosis and better antibiotic stewardship. In a broader context, the combining of care pathway simulation with economic valuation serves to place the patient at the centre of 21st century healthcare, which is both precise and perhaps more personalized. Understanding patient needs as the consumers of innovative healthcare interventions creates the opportunity to pull adoption into clinical practice.