

Implementation of a Diagnostics Consultation Service Improves Health Outcomes

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ABSTRACT

Consultations with health care practitioners and consumers provide clinical laboratory scientists opportunities for evidence-based assessment of the impact of diagnostic information on health outcomes. Methods for characterization and impact of clinical laboratory science (CLS) consultations on health outcomes have not been reported. To address the role of CLS consultations in clinical decision support (CDS), consultation services have been established and evaluated in 4 health care delivery settings: consumer information (CI), diagnostic management intervention (DMI), patient care rounding intervention (PCRI), and utilization review (UR). CI involves interaction with consumers using questions about interpretation of diagnostics parameters and results. DMI is primarily inpatient and requires hand-offs among multiple providers. PCRI can be simple or complex, involving literature searches using hand-held devices and interaction with team members. UR is driven by laboratory information system data. The data are generated by locally-generated and published rules that define daily reports of errors and inappropriate test orders. Consultation interactions in each setting are characterized by variables:

provider type, medical subject/diagnosis, diagnostic question, testing-cycle phase, treatment phase (screen/monitor/diagnose), complexity (number of hand-offs and/or logic steps), patient outcomes, and financial outcomes. The data collected for each variable were analyzed from these encounters over a 1-year period. From these consultations, priority for direction of clinical laboratory resources (material/human) and value (quality/cost) of information have been established. Implementation of the consultation model, real time evidence from consultation services, is combined with evidence from the literature and used to monitor for and correct patient safety concerns. It is also used to inform efforts to provide accurate and timely information for CDS and shared decision-making between consumers and health care providers.

ABBREVIATIONS: CDS - clinical decision support, CI - consumer information, CLS - clinical laboratory science, DMI - diagnostic management intervention, PCRI - patient care rounding intervention, UR - utilization review.

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