LETTERS

Test Result Follow-Up: A Systematic Review

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To the Editors:—In a systematic review Callen and colleagues¹ found a failure to follow-up for 7 and 62% of abnormal laboratory test results and up to 36% of abnormal imaging studies in ambulatory practice. In the same issue, Sittig² cites an average of 57 alerts per physician per day. Herein lies the problem. If each individual result must be reviewed by the physician as it randomly returns to the inbox, disconnected in time from the patient encounter, the physician must then spend the time to navigate to the patient's chart, review the clinical context for optimal decision making, and communicate with the patient. This could take 1–3 min per alert or roughly 2 h per day. Many primary care physicians report 1–2 h of inbox work³ or 3–4 h per day on combined documentation, inbox, and other administrative tasks^{3,4}, consistent with this estimation. Much of this effort is waste.

Improved practice engineering of processes for test ordering, results reporting, and inbox management are needed to maximally leverage physician resources in primary care and to mitigate this waste.

Planned care appointments with pre-visit laboratory testing can improve the quality of visit-based shared decision making, decrease the work of post-visit result reporting, and limit the number of results that are lost to follow-up.

In our practice⁵, 95% of laboratory and radiology tests for prevention and chronic illness care are done before the appointment and discussed with the patient at their visit. There is a standard, deliberate process: the physician plans the next appointment at the conclusion of each visit, indicating on a check list the laboratory tests and x-rays the patient will need. The patient takes this list to a receptionist who keyboards the information into the laboratory test and x-ray scheduling systems. (We have found it requires 5 s of physician time per patient to use the checklist

compared with 2 min/patient to do the keyboarding, and thus we entrust this clerical work to the reception staff.) Patients receive reminder calls, letters, and/or texts for their subsequent laboratory test and clinic appointments. The work is further streamlined by empowering the nurse to filter the physician's inbox and review with the physician the minority of test results that require the physician's immediate attention. This proactive planned care process decreases the number of results that must be reviewed out of context and the number of missed results, and it minimizes waste of scarce primary care physician resources.

We believe that the primary care physicians' time is under-valued and the physician is under-supported in many clinical settings. We don't think the solution is simply shrinking panel sizes and converting some visits to phone or email visits. There has to be a re-conceptualization of the role of the physician within a high-functioning team and a vigilant defense against unnecessary work, work that could be delegated to a well-trained team member or work that can be eliminated through better planning.

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