Better Tests Also in Primary Care

TO THE EDITOR—We welcome the Infectious Diseases Society of America (IDSA) policy paper about the need for better point-of-care tests (POCTs) to support improved clinical care for infectious diseases, but consider that additional considerations from a primary care perspective, where most infections are managed, also need to be taken into account [1]. Primary care accounts for >80% of all human antimicrobial use, 60% of which is prescribed for mainly self-limiting respiratory tract infections [2]. Cals and van Weert have proposed conditions that a new POCT should satisfy before general use in primary care [3]. The test must be accurate, easy to use, used frequently, and rapid. Whereas a result within an hour may be appropriate for secondary care, the time to result in primary care should ideally be less than the duration of an average consultation. In addition, POCTs must be feasible and easy to interpret [4].

The IDSA policy paper emphasizes making an etiological diagnosis. In primary care, predicting prognosis and response to treatment is probably more important. Many bacterial infections, for example, will not benefit meaningfully from antibiotic treatment, and so tests that correctly identify such patients, rather than the causative organisms, will be most useful [3, 5]. Tests are unlikely to be useful if management without antibiotic treatment is generally safe. Ruling out likely benefit from antibiotic treatment as well as determining antibiotic sensitivity in those likely to receive meaningful benefit from antibiotics are priorities.

Rapid antigen detection tests for managing sore throat are a useful example. Apart from the limitations of sensitivity, most episodes of acute pharyngitis in developed countries are self-limiting and rarely become complicated [6]. Although guidelines support the use of antibiotics for pharyngitis caused by group A β-hemolytic streptococci, actual patient benefit is marginal, and benefit is not well established for antibiotic treatment for other etiologies, such as groups C and G streptococci or anaerobes [7].

Other POCTs not mentioned in the IDSA policy paper might be more useful. For example, C-reactive protein (CRP) testing is now a 1-step procedure that gives a result in approximately 3 minutes, and has been associated with significant reductions in antibiotic prescribing for respiratory tract infections without...
compromising patients’ outcomes [8]. In addition, CRP is a useful predictor of outcome in some infections. For example, a concentration >40 mg/L was the most important predictor of clinical failure in patients with acute exacerbations of mild to moderate chronic obstructive pulmonary disease not treated with antibiotics [9]. In addition to communication about test results with clinicians, effective communication about the meaning of results with patients is also critical, and test results need to be considered in the context of other findings [10, 11].

New diagnostics should only be recommended for use in routine care if they fulfill a clinical need and have been shown to be cost-effective in improving patient outcomes. The need for research to develop better POCTs and define which tests should be recommended for use in primary care and under what circumstances should receive far greater emphasis.

Note

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