Clinical Prediction Rules

The value of clinical prediction rules to identify adults at risk of falling

HRB CENTRE FOR PRIMARY CARE RESEARCH

Clinical prediction rules (CPRs) are clinical tools that take account of a patient's history and clinical examination to stratify patients according to their probability of having a specific target disorder. Outcomes of CPRs can be presented as diagnosis, prognosis, referral or treatment. Although not designed to replace clinical knowledge and experience, the prediction rules can be used to assist the overall diagnostic and prognostic process. The Health Research Board (HRB) Centre for Primary Care Research (www.hrbcentreprimarycare.ie), in conjunction with the School of Physiotherapy and Department of General Practice RCSI, has recently conducted two systematic reviews to examine the value of the value of two commonly used CPRs to predict falls, particularly among older adults.

RCSI
ROYAL COLLEGE OF SURGEONS IN IRELAND
COLÁISTE RÍOGA NA MÁINLEÁ IN ÉIRINN

Queen's University Belfast

HRB Health Research Board

TRINITY COLLEGE DUBLIN

123 St Stephen's Dublin 2, Ireland

Clinical Prediction Rules

The value of clinical prediction rules to identify adults at risk of falling

In a study published in BMC Family Practice [1], Dr Rose Galvin examined the value of the STRATIFY rule, a clinical rule designed to identify individuals at risk of falling. The rule is based on five items that address risk factors for falling including past history of falling, patient agitation, visual impairment affecting everyday function, need for frequent toileting, and limited transfer ability and mobility. The rule yields a possible score between 0 and 5 with an individual deemed at high risk of falling if two or more of the items are present. Results from 18 studies incorporating 11,378 patients indicate that the STRATIFY rule is limited in its ability to predict falls and should not be used in isolation for identifying individuals at high risk of falls in clinical practice.

More recently, Dr Emma Barry, a GP and lecturer in the Department of General Practice collaborated with researchers at the HRB Centre and the School of Physiotherapy to complete a systematic review of the Timed Up and Go Test (TUG). A TUG score of ≥13.5 seconds is routinely used to identify individuals at higher risk of falling. Twenty five studies were included in the systematic review and the results demonstrate that the TUG does not accurately identify community dwelling older adults at risk of falls. The findings were published in *BMC Geriatrics* [2].

These reviews highlight the importance of examining the totality of evidence prior to the use of CPRs in clinical practice. Evidence from these systematic review of diagnostic accuracy suggests that a single assessment tool like the STRATIFY or the TUG should not be used to identify adults at increased risk of falls. At present it is recommended that clinicians should continue to complete a multi-factorial falls assessment and apply caution when screening for falls risk using these methods until more robust evidence is available.

These reviews will contribute to the ongoing work at the HRB Centre for Primary Care Research in the development of an international register of clinical prediction rules relevant to primary care. This web-based register will be made publicly available in 2014 through the Cochrane Primary Health Care Field (www.cochraneprimarycare.org).

Professor Tom Fahey, Principal Investigator of the HRB Centre said, 'This register will assist with the knowledge transfer of evidence based medicine in clinical practice, at the point of patient care'.

The articles can be viewed at:

[1] Billington J, Fahey T, Galvin R. Diagnostic accuracy of the STRATIFY clinical prediction rule for falls: A systematic review and meta-analysis. *BMC Family Practice* 2012; 13:76.
http://www.biomedcentral.com/content/pdf/1471-2296-13-76.pdf

[2] Barry E, Galvin R, Keogh C, Horgan F, Fahey T. Is the Timed Up and Go test a useful predictor of risk of falls in community dwelling older adults: A systematic review and meta- analysis. *BMC Geriatrics* 2014; 14:1.
http://www.ncbi.nlm.nih.gov/pubmed/24484314