Risk Prediction Tools

Gateway Ref: 16484

Introduction
The purpose of this note is to provide some basic, factual information on some of the risk stratification tools that we are aware of at DH [There may well be other tools out there that we are not aware of]. As we move towards a position of local responsibility rather than a top down approach, this information has been pulled together with the intention of being a supportive aide for any part of the NHS that has an interest in implementing risk stratification tools locally.
The use of risk profiling is one of the three key drivers for the QIPP LTC workstream with a focus on ensuring commissioners understand the needs of their population, in order for effective interventions to be targeted and prioritised.

PARR ++
The Patients At Risk of Re-hospitalisation (PARR) Case Finding Tool systematically idenitifies patients who are at high risk in the future of readmission to hospital via emergency admissions. It extracts information from Hospital Episode Statistics (HES) data using criteria that are known to be risk factors in future admissions to hospital. A CD-Rom with the PARR++ software can be requested by contacting the following email address: longtermconditions@dh.gsi.gov.uk

Combined Predictive Model
The Combined Predictive Model is based on a comprehensive dataset of patient information, including inpatient (IP), outpatient (OP), and accident & emergency (A&E) data from secondary care sources as well as general practice (GP) electronic medical records to enable a PCT to identify people whose condition is deteriorating but who would not yet be picked up by PARR.

There is no tool to download as it was designed to be developed at a local level through using in-house expertise or by commissioning a private company to build the model. Request a copy of the final report and technical documentation and the files to support building a CPM by contacting the following email address: longtermconditions@dh.gsi.gov.uk

Sussex Predictor of Key Events (SPOKE)
SPOKE has been developed by the Sussex Health Informatics Service (HIS). The tool works by analysing the healthcare history of each resident in Sussexto predict likelihood of future admission. Community Matrons access this information on a regular basis to develop and prioritise their active patients for caseload management, in order to reduce/avoid admission. For more information on SPOKE please visit: http://www.sussexhis.nhs.uk/

United Health UK RISC
RISC is a patient-centric predictive modelling tool developed by United Health UK, specifically for the NHS. It assesses the risk of patients having unplanned hospital admissions within a 12 month period, allowing the targeting of individuals at the highest risk, with preventive care interventions. The RISC model has been

showcased as part of the QIPP LTC Workstream. For more information on RISC please visit:
http://www.unitedhealthuk.co.uk/OurTechnology/HealthNumericsRISC.aspx

Doctor Foster's High Impact User manager (HUM)
In conjunction with Imperial College London and University College London, Dr Foster Intelligence has developed the HUM system that enables Primary Care Trusts and GP practices to access up-to-date information via the web and to conduct their own analyses to generate lists of potential patients who are, or may become, high-impact users of secondary care services. The system identifies patients with conditions where hospitalisation is considered at least partially preventable. For more information on Dr Foster please visit:
http://drfoster.co.uk/pdf/DFI-HUM-FactSheet.pdf

United Health Europe - Evercare
The Evercare programme improves care for frail elderly people, most of whom have multiple medical and social problems, receive fragmented, episodic care and are often admitted to hospital for reasons that could be prevented with better care by. An enhanced nursing role is at the heart of the EverCare model and these nurses work closely with GPs, hospital doctors and other care staff as part of a primary care team to deliver integrated care. For more information on Evercare please visite:
http://www.natpact.info/cms/186.php