Futuristic app to help predict patient readmissions

Aridhia has developed an online app to reduce the number of patients readmitted to hospital within 30 days to transform Nuffield's readmission risk model.

A new app for doctors could help them improve patient outcomes and ease the budgets of NHS England hospitals by predicting the risk of readmissions.

Since 2011, over £390 million has been withheld from English hospital budgets under a policy that penalises the hospital if a person is readmitted within 30 days. This scheme was introduced by the then Health Secretary Andrew Lansley in response to the negative impact of another initiative where hospitals were incentivised to cut lengths of stay, causing an increase in the number of emergency readmissions.

Use of the new app means it could take doctors less than two minutes to predict a risk of readmission which may even be avoided if an intervention is deployed accordingly, potentially saving their hospital thousands of pounds as well as improving patient outcomes.

The app – PARR30 Community Edition – which is being made available through Aridhia's Community Programme, calculates risk through a predictive

mathematical model developed by the Nuffield Trust using an anonymised 10% sample of all NHS England hospital admissions between April 2008 and 2009.

Easy to use in real-time and by the bedside, the app processes 17 pieces of information which can be obtained from hospital information systems or from the patient's notes. These include their date of birth (to calculate age), detail on recent admissions and diagnosis of any major health conditions (these include eleven major health conditions drawn from the Charlson co-morbidity index).

The app is powered by Aridhia's platform, AnalytiXagility, which provides services focused on improving service delivery and patient outcomes for chronic disease management. In turn, this is intended to accelerate multi-institution collaboration for translational medicine and bring about the benefit of wealth creation through shared IP and royalty models.

Through its community programme, Aridhia says that it is committed to translating research into clinical practice and is looking to engage healthcare in the transformational journey to become a predictive and wellness service. PARR30, the first of the company's

> " David Sibbald, CEO of Aridhia, says, "PARR30 is a brilliant example of how anonymised data can be put to use in a practical way to improve the outcomes of patients across the NHS and is the first App launched in our data safe haven."

community edition apps delivers at point of care analytics to support informatics innovation into the NHS.

PARR30 is the first release as part of the company's new Translational service, which it says enables the rapid, bespoke build of data applications for clinical and research use. The company explains that data collection apps, risk stratification apps, and clinical trial selection apps can all be built in a matter of weeks, and interact with Aridhia's data safe haven environment, AnalytiXagility.

Aridhia is inviting interested NHS Trusts to register their details and become a partner in this translation of research into clinical practice. In addition, Aridhia is also offering a Trust Edition, a paid for service to allow trusts to localise the scoring algorithm by using additional data to calibrate and personalise PARR30 to a specific hospital.

www.aridhia.com

29