NIHR Collaborations for Leadership in Applied Health Research and Care South West Peninsula (PenCLAHRC)

Case Study Example of the Value of NIHR CLAHRC Funding
1st April 2015 – 31st March 2016

CANCER DIAGNOSIS

Using analyses of the primary care histories of cancer recorded in routine data, Willie Hamilton's team have characterised the risk of cancer associated with a range of symptoms. These are used to produce algorithms which help GPs to understand the cancer risks associated with symptoms and identify cancer more quickly. The work programme continues, but currently includes 16 algorithms, presented as Risk Assessment Tools - RATs. These tell GPs the risk of a particular cancer for a patient with one or more symptoms.

RATs presenting the risks for lung, colorectal ovarian, bladder, kidney and uterine cancer have been disseminated to all GP practices in England. Further work converted the algorithms into electronic software which auto-searches GP records for patients with possible cancer, and alerts the GPs to this possibility. In this way, the epidemiological research based on routine data has been converted into a decision support tool which prompts GPs to consider case finding. It is important to recognise that until recently the UK's performance in early identification of cancer has been very poor. Hamilton's work is helping to support UK primary care in achieving excellence in Cancer diagnosis.

A recent strand in the work of this group has been to identify the potential for thrombocytosis (an abnormally raised platelet count in the blood) to act as an indicator of malignancy. Hamilton's group have shown that raised platelets may be relevant in the diagnosis of a wide range of cancers - lung, colon, ovary, oesophago-gastric, bladder and pancreatic cancers. Thrombocytosis may indicate an increased risk of having an underlying cancer of any of these types - which may be more than 4% and as high as 10%.

The work of this group has already been highly influential on guidance for the NHS. It has been used by NICE in their updated guidance on NHS investigation for cancer ("Suspected cancer: recognition and referral") on this subject (published June 2015). This influential practice guidance includes 176 recommendations, of which approximately 30 are directly related to one of the papers reporting Hamilton's work on RATs.

CONTRIBUTION OF NIHR CLAHRC

PenCLAHRC supports the salary of members of Hamilton's team and the lead researcher's salary constitutes match funding for the CLAHRC from the University of Exeter. The work on

thrombocytosis is directly supported by the CLAHRC and statistical support for all of Hamilton's work is provided through PenCLAHRC methodological resources.

WHAT HAPPENED NEXT?

The UK's cancer figures are improving rapidly. It is difficult to assign this to diagnostic improvements, or to treatment improvements (or more likely, both). However, some is clearly diagnostic; the proportion of cancers diagnosed as an emergency is falling by 1% each year (saving approximately 15,000 lives annually over the last 5 years), and the time to diagnosis with a symptom is falling. These are – to a large extent – attributable to our diagnostic work. In many cases, earlier diagnosis will result in less health care resource consumption, leading to savings to the NHS budget. It is not possible, at this stage, to identify these savings.

RATs have also been internationally influential, being adopted by Denmark and some Australian States, and are being adapted for Sweden. The WHO is in the early stages of considering them for poorer countries in Eastern Europe.

The work carried out in PenCLAHRC has helped support successful development of Hamilton's work through research funders such as CRUK, who are funding an RCT using RATs, and other cancer charity funding.