BRC Multi-morbidity & Longterm Conditions Theme

The Theme vision is to provide rapid translation of research discovery within laboratory and information science to healthcare delivery with a particular focus on the interface between primary and secondary care in key clinical areas that have high national priority. The mechanisms to enhance translation employed by the theme are:

i. novel data on population health informing into the BRC for candidate translational interventions;
ii. mechanisms to test promising early phase technologies developed within the BRC in wider generalisable populations; and
iii. a methodological programme to improve translational research design and implementation.

The platform and resources of the theme are divided into four sub-themes, each addressing a mechanism to enhance translation from basic science research to applied health research with a focus on improving patient outcomes:

Sub-theme 1: combines generalizable cohort studies identifying novel risk phenotypes with linked trials (active and planned) translating early mechanistic studies to applied health research paradigms powered for clinical benefit that recruit within identified high risk phenotypes (valvular heart disease, acute vascular disease, chronic kidney disease).

Sub-theme 2: develops and evaluates digital health for chronic disease management with a focus on integrated, patient-centred, affordable and sustainable systems for proactive management of people with chronic conditions in the community.

Sub-theme 3: is a methodological programme developed to facilitate translation from discovery science to real world implementation, focusing on three areas: Statistics; Health economics; and Large database epidemiology.

Sub-theme 4: The evidence-based medicine DataLab combines traditional research and high impact clinical informatics, to facilitate practitioner application of evidence-based practice. It involves real-time provision of clinical comparator performance for 'nudging' practitioner change and prediction of clinical outliers.

The Theme's research over the next few years will focus on multi-morbidity and long term conditions, a key health target population for all heath systems given the disproportionate impact on target healthcare budgets from this minority but expanding patient population.