

Knowledge translation in genomics

Background

Knowledge translation (KT) is a field of science increasingly used internationally by health services, governments and research funding bodies. Its purpose is to use evidence to guide decision-making in policy and practice – benefiting clinicians, patients, policymakers and the community.

KT is defined as ‘the synthesis, exchange and application of knowledge by relevant stakeholders to accelerate the benefits of global and local innovation in strengthening health systems and improving people’s health’ – or, more succinctly, closing the ‘know-do’ gap.

In response to the vital role that KT plays in reducing the gap between research and practice, Melbourne Genomics established this strand of work to optimise evidence from Clinical Flagships and further drive the incorporation of genomics into clinical care.

Project description and activities

The objective: to foster the future adoption by clinicians of Flagship evidence, using established knowledge translation methods.

Three KT activities were undertaken by Melbourne Genomics during the period 2018 to 2019:

- A Knowledge Translation Framework was developed, using the widely applied ‘knowledge to action’ theoretical framework. This Melbourne Genomics KT Framework was used to determine Flagship readiness for KT activities.
- An assessment of all 11 Clinical Flagships was undertaken using this KT Framework. The Advanced Solid Cancers Flagship was assessed to be at the best state of readiness, and was thus given the highest priority for KT.
- A clinician decision-making tool was the first KT activity for the Advanced Solid Cancers Flagship. The tool was co-designed with Flagship oncologists, aiming to increase clinician confidence to assess the right test for the right patient.
- A second Advanced Solid Cancers Flagship KT activity was development of an electronic direct mail campaign to increase oncologists’ awareness of the utility of genomics. This comprised a peer-to-peer video and infographic material demonstrating the clinical utility of cancer genomic information, and was targeted to oncologists in regional Victoria.

Lessons learnt

- Leaders of the Clinical Flagships were keen to develop and implement KT resources to support clinician adoption of genomics. However, their initial suggestions for tools were often inconsistent with KT approaches known to be effective.
- Although a common framework could be applied across disciplines to assess readiness, KT activities require tailoring to each specific discipline and context. A participatory approach was successful to ensure KT resources are relevant to the specific population of interest.
- A long lead-time is needed for planning, co-design and implementation of KT activities.
- Piloting to assess feasibility and acceptability of KT tools can be conducted prior to implementation of genomic testing. Piloting needs to allow enough time for clinician familiarity and use of the tool.

Impact

Melbourne Genomics now has a framework to assess clinical projects' readiness KT activities, which has been tested across a number of medical specialties and genomic applications.

Two KT tools are ready for deployment by clinicians leading the Advanced Solid Cancers Clinical Flagship.

An evaluation plan has been designed and is ready for implementation when these KT tools are deployed.