New pathways of care for colorectal patients in Sheffield

Macmillan's Routes from Diagnosis is a robust analytical framework which can help service development teams understand their local population and support cancer pathway design.

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The problem

The North Trent Cancer Network (NTCN) is a large network that has one of the highest levels of cancer incidence and mortality in the country. With cancer prevalence predicted to increase by 2 million to 4 million by 2030 in the UK, Macmillan, the NTCN and NHS Sheffield recognised a need to design and test risk-stratified colorectal care pathways that move patients from a health and social care-led arrangement to a more self-managed approach.

The solution - baselining and describing the local population

Macmillan's Routes from Diagnosis (RfD) survivorship outcome framework facilitates the linkage and analysis of routinely collected data. Locally-specific linked cancer registry and hospital episode statistics (HES) inpatient data only (national level outpatient and AE data was not available) for NTCN colorectal patients (diagnosed from 2006 – 2008 and followed until end 2010), was applied to the RfD framework (Wells et al 2011, Woolmore et al 2012). Patients were allocated into the 8 survivorship outcome pathways based on survival and coding of morbidities through ICD10 codes in HES with the aim to help in pathway redesign and intervention modelling (Fig 1).
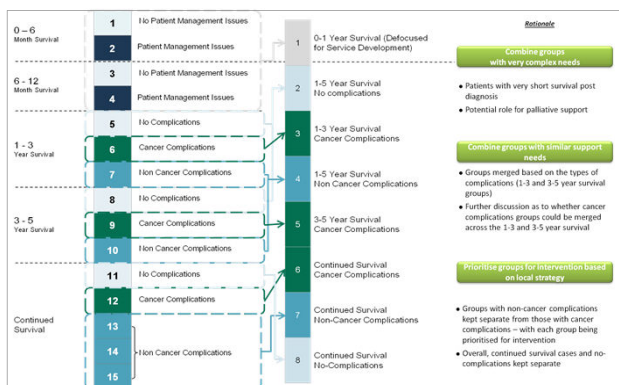

Fig 1. Simplified Survivorship Outcome Pathways

Descriptive Dashboards (presenting demographics, clinical outcomes and activity profiles) and Outcome Group Pathway Descriptions (a qualitative view of care, showing what a typical patient might present as, and what they would likely experience along their pathway) were created for each outcome group.

The outputs – designing new care pathways

Clinical workshops were held to discuss and identify priority areas for service re-design using the population summary information. Clinicians and service development teams, worked to identify i) trigger points detection where services could be put in place to prevent a patient's progress on to a less favourable Survivorship Outcome Pathway , and ii) new services of care tailored to patients for each Survivorship Outcome Pathways as shown in Fig 3 a and b.

Each Survivorship Outcome Pathway and relevant 'trigger point detection' and 'new services of care' were mapped on to Maher and McConnell 's Cancer Care Pathway model as in Fig 4.

J Wells , A Woolmore, et al. Using clinical attendance patterns to determine likely survivorship journey in England, 2011. Liberating Information, Improving Outcomes - National Cancer Intelligence Network (oral presentation)
A Woolmore, R Adrian, et al. Testing the applicability and robustness of a Nationally-derived, tumour-specific survivorship outcome framework with recent, localized data (colorectal cancer, North Trent), 2012. Cancer Outcomes Conference - National Cancer Intelligence Network (poster presentation)
J Maher, H McConnell. New pathways of care for cancer survivors: adding the numbers. British Journal of Cancer 2011: 105 S5-S10

Fig 3 Examples of a) trigger points and new services of care, b) description rationale and benefit
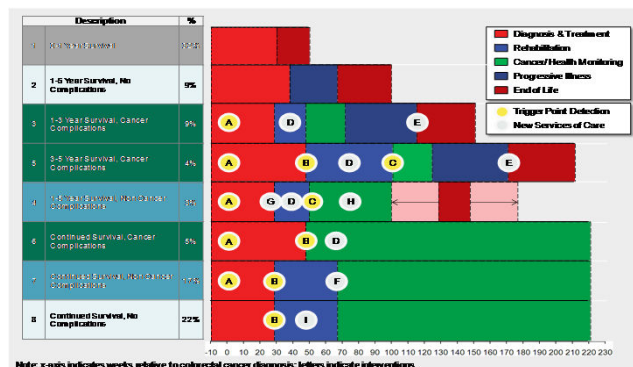

Fig 4. Interventions mapped against Maher McConnell model
(Maher et al 2011)

The 8 Survivorship Outcome Pathways clearly distinguished very separate groups, however for practical and feasible purposes of pathway design and application the needs of various groups were amalgamated into 3 distinct pathways (Fig 5). Interventions identified are indicated with an *A or B etc. so for cross referencing to the outputs created as in Fig 3a

Fig 5. Final survivorship outcome pathways for testing.

The end product

Macmillan's RfD framework has enabled local analysis of service use, understanding of health needs along the pathway, and identified where needs are not being met in the most appropriate or cost-effective way. We have used this to design new pathways of care with NTCN staff and clinical leads that better meet needs and make better use of resources. However, there are some challenges in the practicality of implementing more than 3 tailored pathways. Designed pathways are currently being tested and evaluated. Limitations were present in the lack of availability of HES outpatient and A&E data. Future work will concentrate on integrating these data sources to enable a complete understanding of service use.

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