Nottingham and Nottinghamshire ICS

Colorectal

Clinical and Community Services Strategy

March 2021

This information has been placed in the public domain in order to benefit patients across the country as we believe the experience and approach may be useful for others, however we request that acknowledgement to the work in Nottinghamshire is made and referenced in all materials. This helps us to understand the wider impact benefits of our programme. Please cite 'this work has been informed by the Nottingham and Nottinghamshire ICS' when referencing.

Contents

1. Executive Summary

The Integrated Care System (ICS) ambition across Nottinghamshire is to both increase the duration of people's lives and to improve the quality of those additional years, allowing people to live longer, happier, healthier and more independently into their old age. The aim of the Clinical and Community Services Strategy (CCSS) is to support the system to achieve this by shifting the focus of our health and care delivery from reactive, hospital based treatment models to a pro-active approach of prevention and early intervention, delivered in people's homes or in community locations where this is appropriate with a long term view of beyond 5 years.

Colorectal includes both cancer and non-cancer conditions. Colorectal cancer (CRC) is the 4th most common cancer, with 42,000 people diagnosed each year and 268,000 people who have had CRC in the UK. 94% of people diagnosed are aged 50 and over. Crohn's disease and Ulcerative Colitis are the two forms of Inflammatory Bowel Disease (IBD) affecting 300,000 people in the UK. Symptoms of CRC and IBD can be similar to other functional disorders, with gastrointestinal symptoms accounting for 10% of GP consultations and demand for secondary care referral.

Some of the biggest risks and determinants to poor health across England also increase the risk of cancer and non-cancer colorectal conditions. These include obesity, smoking, poor diet and alcohol, but there are also inequalities found in areas of greater deprivation, cultural diversity and poor social and mental health wellbeing.

The NHS Long Term Plan (LTP) makes strong reference to reducing the risk factors that contribute to premature death as indicated by Global Burden of Disease (GBD) rankings, contributing to a reduction in incidence. There is an ambition to raise the proportion of cancers diagnosed at stages 1 and 2 from around half to three quarters of cancer patients by 2028. This being achieved in part by modernisation of the Bowel Screening Programme and accelerated diagnosis, through Rapid Diagnostic Centres (RDC), to meet the ambition of a definitive diagnosis of cancer within 28 days of referral. The NHS LTP also makes a commitment to support access to the right expertise at the right time, which includes consideration to the separation of urgent and routine surgical procedures and enhancing Same Day Emergency Care (SDEC). For people with long term conditions (LTC) the NHS LTP aims to boost out of hospital care and achieve joined up care, contributing to the reduction in outpatient (OP) attendances by one third in the next 5 years. This colorectal review seeks to align with national direction and local implementation through several programmes of work that are underway, including the ICS Cancer work stream and work of the East Midlands Cancer Alliance (EMCA).

This colorectal service review has been undertaken as part of the ICS CCSS work stream. It has been supported by clinical experts and stakeholders in the development of place based service models for the future, to support the long term needs of our existing citizens. The review also focuses on embedding prevention in our population over the next 5-10 years, by shifting our culture from one of illness to one of healthier lifestyles and self-care.

The strategy identifies major stages in the journey of those with colorectal conditions and stresses a need to reorganise the way in which these services are delivered, from prevention through to longer term management. A whole pathway approach in the provision of colorectal services is crucial in order to maximise the clinical outcomes for patients, their quality of life and experience of colorectal services.

Key themes have been identified along with key transformational opportunities and potential impacts have been developed which include: prevention and education strategies to reduce risk, early detection and diagnosis to support early intervention; prehabilitation offer and configuration of inpatient care to support enhanced recovery; defined pathways for non-cancer referrals to navigate to the right expertise at the right time; access to expertise with enhanced community provision; Multi-disciplinary teams (MDTs) and opportunities for joint working for cancer and non-cancer to coordinate care and enhanced use of technology to connect the system.

A transformational 'Bridge to the Future' highlights current service offers across the ICS and identifies some potential long term next steps that can be taken to achieve the identified opportunities with proposed timelines and the expected outcome for our citizens of Nottinghamshire.

The recommended next steps are vital in keeping the momentum of change in the future offer of improved prevention and better mental wellness for our citizens; providing the right tools for our population to support their wellbeing; providing strong communication links for our staff is vital to enable them to provide the best care for our citizens; the most appropriate models of care in hospital settings, neighbourhood and home need to be provided equitably across the ICS and be provided using best evidence, flexibly and in a patient centred holistic way for them to fulfil their maximum potential throughout their lifetime.

2. Introduction

Background and Purpose	In Nottinghamshire we have made great progress in improving people's health and wellbeing. Today, we can treat diseases and conditions we once thought untreatable. However, our health and care system faces change and this will impact on our services, for example, the growing prevalence of long-term health conditions places new strains on our system. There is inequality evident in both the location of services and in access to services. In some areas, it is easier to access a GP or than in others, or to find things to do to enable citizens to stay active and fit. The ICS ambition across Nottinghamshire is to both increase the duration of people's lives and to improve those additional years, allowing people to live longer, happier, healthier and more independently into their old age. The requirement for a CCSS came from the recognition that to achieve this ambition the system has to change as a whole, rather than just in its individual acute, primary care, community and social care elements. It is recognised that only by working together to describe changes in how care is provided across the system, rather than through individual organisations, will we deliver the scale of change required.
The ICS Clinical and Community Services Strategy	The aim of the CCSS is to support the system to achieve this by shifting the focus of our health and care delivery from reactive, hospital based treatment models to a pro-active approach of prevention and early intervention. This should be delivered closer to people's homes or in community locations where this enables better prevention, more supported self-care and earlier intervention to support citizens. The Strategy recognises that achieving this change is a long term programme that will be delivered over the next 5 years and beyond. This is also to enable a necessary long term investment in the health and care buildings and infrastructure in the system. An overall CCSS whole life model framework has been developed to focus on the need to support people through their lives from living healthy, supporting people with illness and urgent and emergency care through to end of life care. Citizens can experience different parts of the system at different stages in their lives. With the development of the overall Strategy framework the next phase of work is to review the 20 areas of service across the ICS that collectively form approximately 80% of the volume of clinical work in the ICS. This will ensure that overall the Strategy is described as a coherent whole and generates a programme of change for the whole ICS. This review of Colorectal Services provides the opportunity to be such a review and is part of the third phase of work.
NHS Long Term Plan	The NHS LTP is clear that to meet the challenges that face the NHS it will increasingly need to be more joined up and coordinated in its care; More proactive in the services it provides; More differentiated in its support offer to its individuals. The ICS has focused on describing 5 areas of focus for the delivery of the NHS LTP. These requirements are reflected in each of the service reviews that collectively will describe the CCSS **1. Prevention and the wider determinants of health -** More action on and improvements in the upstream prevention of avoidable illness and its exacerbations **2. Proactive care, self management and personalisation -** Improve support to people at risk of and living with single and multiple long term conditions and disabilities through greater proactive care, self-management and personalisation **3. Urgent and emergency care -** Redesign the urgent and emergency care system, including integrated primary care models, to ensure timely care in the most appropriate setting **4. Mental health** - Re-shape and transform services and other interventions so they better respond to the MH and care needs of our population **5. Value, resilience and sustainability -** Deliver increased value, resilience and sustainability across the system (including estates)

3. Approach and Scope

Approach	This strategy has been developed through an open and inclusive process which weaves together the expertise of clinicians and care experts with commissioners and citizens in determining the future shape of services across the system. There have been a variety of stakeholder and service user events to develop a clinical and community services model. An extensive system wide piece of work is taking place across a minimum of 20 services. The CCSS Programme Board have reviewed these services against a range of quantitative and qualitative criteria and agreed the third phase of seven service reviews. These include Gastroenterology, Depression and Anxiety, Heart Health, Colorectal, Urological Health, Oncology and End of Life Care. This document discusses the approach, scope, the key issues and potential transformational opportunities within Colorectal services across the ICS. Health, social care, public health and the voluntary sectors have all been considered through reviewing the current service offer across the ICS. The service review was taken over approximately 14 weeks and there were two workshop held with stakeholders from across the ICS. An evidence review pack was developed which considered national and local best practice to inform the development of potential themes and new models of care where transformational change may take place across the ICS in the future.
Scope	For the purpose of the colorectal review, the following focus was agreed: **In scope:** • Adults age 18 years + • Colorectal cancer • Inflammatory Bowel Disease – Crohn's Disease/Ulcerative Colitis • Diverticulitis • Haemorrhoids/Fissures/Prolapse/Incontinence **Out of Scope:** • Specialised commissioned services e.g. Intestinal Failure • Paediatrics • Diagnostic Provision (demand & capacity – already a wider system diagnostic review
Engagement	The colorectal service review has been supported by a tailored Colorectal Steering Group involving stakeholders and clinical experts from across the ICS. They have provided expert advice, guided, confirmed and challenged assumptions throughout the period of review and connected to other workstreams. This group has formed part of the governance process along with the CCSS Programme Board. Two virtual workshops have been held enabling a wide breadth of stakeholders (Consultants, GPs, CNS, healthcare scientists, allied health professional (AHP), Pharmacists, Heads of Service, Commissioners and others) to be proactively involved in re-evaluating current service offers across the ICS, in developing potential themes and agreeing transformational change for the future Clinical and Community Services Strategy. Patient engagement has enabled confirm and challenge of assumptions and play an active part in the co-design of any future service changes across the ICS.

4. Contents

Strategy Development	This Strategy Document consists of five key elements. These have been developed through a process of design and iteration at the workshop and steering group meetings and includes key stakeholders from across the system. The strategy has been developed with reference to the Evidence Review document and the patient focus group that has been held.
Priorities for Change	The work of the Steering Group and the workshop stakeholders identified and confirmed four key areas of focus that need to change in the ICS for colorectal. These were based on a review of the current issues facing the ICS and the views of the Steering Group and workshop attendees. Some service user experience has also been incorporated into the development of the strategy.
Proposed Future Care System	Following the initial engagement, at subsequent steering group meetings, attendees started to develop the future care system for Colorectal to address the Priorities for Change. The future care system is described against two dimensions and aligned to the stepped care model: • **Location** split between - Home (usual place of residence) – Hospital (including both acute and MH) with 24/7 medical presence – Neighbourhood representing all community/primary care and ambulatory care settings • **Urgency** split between - **Emergency/Crisis** requiring a service provided 24/7 to avoid crisis or risk to life – **Urgent** requiring a service 7/7 but not 24/7 to meet urgent care needs – **Planned/Scheduled** reflecting any arrangement where an appointment is agreed between a professional and a citizen The intention of the system model is to focus future care delivery closer to home and also with greater levels of scheduled care to best use the available resources and reduce demand on urgent and emergency care services. The new system to address the Priorities for Change is presented for each location and then summarised overall for the ICS.
Transformation Proposal	The Transformation proposal describes the key initiatives or programmes that are required to deliver this new model. As described earlier, for Colorectal services, some of these programmes need to be developed in more detail. Namely, • **Priority** – What is the priority of the initiative in the view of the steering group and workshop attendees • **Alignment** – At what level of the system should we aim for a consistent approach for each initiative? This was split into two categories: ▪ Alignment to achieve **consistency** - In most instances this is ICS or Integrated Care Provider (ICP) level where with the greater value is perceived to be in an overall consistent approach. ▪ Alignment for **delivery** of the proposal - There are some instances where the recommendation is for delivery to be at ICP level, alternatively, it is at Primary Care Network (PCN) level where differential delivery would benefit the needs of very local populations • **Enabling Requirements** – What is required to enable each Programme to deliver? This includes workforce, technology, estate or service configuration. There are also requirements of culture or finance and commissioning to allow the system to work together differently • **Benefits and Costs** – Where available, the key benefits of the initiative at system level are summarised
Service Vision	The 'Bridge to the Future' was generated at a further virtual steering group meeting. It summarises the current challenges for the colorectal system in the ICS now (Priorities for Change), what the ambition is and the outline steps to get there. Progress with the 'Bridge to the Future' and the partnering vision can be returned to with stakeholders as the work develops to review progress.

Colorectal - Key Themes

Prevention & Self-Care

- Risk Factors
- Education

Detection & Diagnosis

- Bowel Screening Programme
- Referral and Triage
- Early Diagnosis & Intervention
- Non-Cancer Diagnosis

Treatment & Condition Management

- Best Surgical Pathways (including Prehab)
- Continence and Stoma Care
- Co-ordination of Care in the Right Place

Whole System Approach

- System Configuration and Interfaces
- Consistent Evidence Based Pathways

Integrated Care System
Nottingham & Nottinghamshire

Priorities for Change – Info-graphics

www.healthandcarenotts.co.uk @NHSNottingham

Obese people are **3 times** more likely to develop colon cancer. NHS Long Term Plan

54% of all bowel cancers could be prevented by adopting a healthier lifestyle.
Bowel Cancer UK

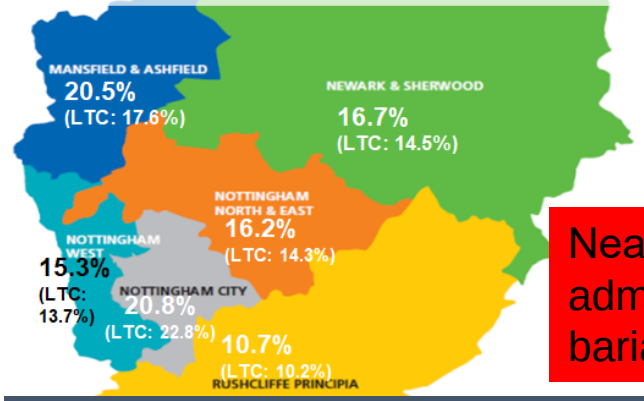
6% of bowel cancers in the UK are linked to alcohol.
Bowel Cancer UK

1 in 20 people will develop bowel cancer in their lifetime. Bowel Cancer UK

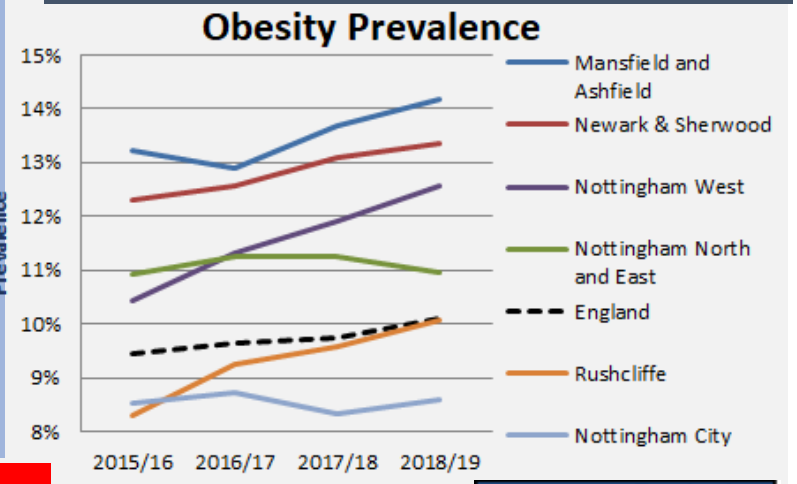
Mansfield & Ashfield have one of the highest obesity rates in England
PHE Fingertips

7% of bowel cancer is linked to smoking
Bowel Cancer UK

Department of H&SC ambition for 12% smoking prevalence by 2022



Morbidly Obese
30,080 people (BMI>40kg/m²) have a reduced life expectancy of 8-10 years.
(4,725 of these people have BMI>50) eHealthscope



Nearly DOUBLE England's admission rate yet half the bariatric surgery NHS Digital

	Admissions (primary/ secondary diagnosis obesity) 2018/19	Admissions per 100,000 (primary/ secondary diagnosis obesity) 2018/19	Barriatric Surgery Admissions 2018/19	Barriatric Surgery Admissions per 100,000 2018/19
ENGLAND NHS Digital	875,663	1,615	7,011	13
NHS England Midlands and East (North Midlands)				
Nottinghamshire	31,500	3,165	60	6

Smokers are twice as likely to get **Crohn's Disease** NHS

Priorities for Change – Info-graphics

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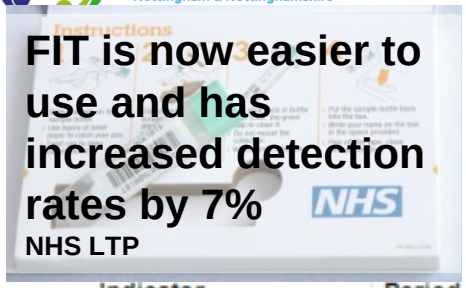

FIT is now easier to use and has increased detection rates by 7%
NHS LTP

Bowel cancer screening reduces risk of dying from bowel cancer by at least 25% NHS England

Rushcliffe has the highest take up of bowel screening of all CCGs in England. PHE Fingertips

Indicator	Period	England	N	Nottingham City Range	Mansfield And Ashfield Range	Rushcliffe Range
Persons, 60-74, screened for bowel cancer within 6 months of invitation (Uptake, %)	2018/19	60.4	62.5*			
Persons, 60-74, screened for bowel cancer in last 30 months (2.5 year coverage, %)	2018/19	60.5	63.2*			
Persons, 60-69, screened for bowel cancer within 6 months of invitation (Uptake, %)	2018/19	57.9	60.7*			
Persons, 60-69, screened for bowel cancer in last 30 months (2.5 year coverage, %)	2018/19	58.0	61.0*			

PHE Fingertips

Nottingham City is in the lowest quartile for uptake. PHE Fingertips

2.9 times the expected rate of Crohn's in Mid Notts and 2.7 times in South Notts. UC is 2.6 times higher in Mid Notts and Nottingham City eHealthscope

Nottingham West, Nottingham N&E, and Newark & Sherwood all have statistically higher take up that the England average and are in the highest quartile. PHE Fingertips

	eHealthscope			per 100,000			
	Crohns	Ulcerative	Population	Crohns in our ICS	England average Crohns	Ulcerative colitis in our ICS	Ulcerative colitis England Average
Mid Notts	1,523	2,115	335,150	454	157	631	240
Nottingham City	1,305	2,460	392,050	333	157	627	240
South Notts	1,605	1,570	379,370	423	NICE 157	414	NICE 240

Integrated Care System
Nottingham & Nottinghamshire

Priorities for Change – Info-graphics

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2,770 people have a **stoma** (excluding urostomy) in Nottingham and Nottinghamshire ICS
NAMS

Pilot at NUH predicts prehab can release 287 bed day saving £71,750. NUH

33% of people with Crohn's Disease have a BMI <20kg/m². ESPEN

Cost of admission for constipation £150,000-175,000 per 100,000 population in our ICS
Bowel Interest Group

Stoma cost per 1,000 population 2019-20

Nottingham & Nottinghamshire CCG

All England CCGs, £234.91

CCG

211 people a day admitted with constipation in England in 2018/19. Bowel Interest Group

FIT opportunity to reduce 2WW referrals by 60% whilst diagnosing 98% of CRC
NICE FIT study

https://www.freepik.com/vectors/frame">Frame vector created by brgfx - www.freepik.com

Emerging evidence suggests that a 4-week period of prehabilitation can increase walking capacity in colorectal cancer patients.
https://www.sages.org/enhanced-recovery/prehabilitation-exercise/

1 in 7 adults suffer with constipation
Bowel Interest Group

10-20% of cancer patients deaths can be attributed to malnutrition rather than to the malignancy itself ESPEN expert group recommendations for action against cancer related malnutrition

1-10% affected by faecal incontinence
NICE

2.5 days reduction in hospital length of stay due to preoperative care
BMJ

58% of people diagnosed with cancer feel their emotional needs are not looked after as much as their physical needs
East Midlands Cancer Alliance

Integrated Care System
Nottingham & Nottinghamshire

Priorities for Change – Info-graphics

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2017 & 2018 data

Colon	Stage 1	Stage 2	Stage 3	Stage 4	Unstageable	Missing Stage
England	6716	12263	11769	11609	20	5338
Notts ICS	**131**	**197**	**182**	**216**	**0**	**125**
Mansfield & Ashfield	16	44	25	29	0	41
Newark & Sherwood	9	33	20	35	0	22
Nottingham City	39	38	59	46	0	23
Nottingham N&E	26	38	25	53	0	14
Nottingham West	18	19	28	24	0	14
Rushcliffe	23	25	25	29	0	11

NDRS 2017 & 2018 data

Colon	Stage 1	Stage 2	Stage 3	Stage 4	Unstageable	Missing Stage
England	15.8%	28.9%	27.8%	27.4%	0.0%	12.6%
Notts ICS	18.0%	27.1%	25.1%	29.8%	0.0%	17.2%
Mansfield & Ashfield	14.0%	38.6%	21.9%	25.4%	0.0%	36.0%
Newark & Sherwood	9.3%	34.0%	20.6%	36.1%	0.0%	22.7%
Nottingham City	21.4%	20.9%	32.4%	25.3%	0.0%	12.6%
Nottingham N&E	18.3%	26.8%	17.6%	37.3%	0.0%	9.9%
Nottingham West	20.2%	21.3%	31.5%	27.0%	0.0%	15.7%
Rushcliffe	22.5%	24.5%	24.5%	28.4%	0.0%	10.8%

Yorkshire & Humberside faecal calprotectin pathway saw 21-50% reduction in colonoscopies
NHSE elective Care handbook

Rectum & rectosigmoid junction	Stage 1	Stage 2	Stage 3	Stage 4	Unstageable	Missing Stage
England	5178	3969	7508	4680	25	2040
Notts ICS	**100**	**95**	**156**	**110**	**0**	**49**
Mansfield & Ashfield	17	15	35	33	0	20
Newark & Sherwood	18	9	26	11	0	14
Nottingham City	29	25	30	26	0	4
Nottingham N&E	17	16	31	22	0	7
Nottingham West	9	15	10	10	0	4
Rushcliffe	10	15	24	8	0	0

Rectum & rectosigmoid junction	Stage 1	Stage 2	Stage 3	Stage 4	Unstageable	Missing Stage
England	24.2%	18.6%	35.1%	21.9%	0.1%	9.6%
Notts ICS	21.7%	20.6%	33.8%	23.9%	0.0%	10.6%
Mansfield & Ashfield	17.0%	15.0%	35.0%	33.0%	0.0%	20.0%
Newark & Sherwood	28.1%	14.1%	40.6%	17.2%	0.0%	21.9%
Nottingham City	26.4%	22.7%	27.3%	23.6%	0.0%	3.6%
Nottingham N&E	19.8%	18.6%	36.0%	25.6%	0.0%	8.1%
Nottingham West	20.5%	34.1%	22.7%	22.7%	0.0%	9.1%
Rushcliffe	17.5%	26.3%	42.1%	14.0%	0.0%	0.0%

96% of patients referred urgently on a 2-week wait pathway will not have CRC
https://gut.bmj.com/content/early/2020/11/10/gutjnl-2020-321956

Yorkshire & Humberside faecal calprotectin pathway saw **40-70% reduction** in new Outpatient Appointments NHSE elective Care handbook

Emergency triage & access to clinician assessment at the front door:

- **15%** reduction in inappropriate referrals
- **57%** same day discharge.

NUH

IBD nurse via a helpline which can provide timely access to expertise and can reduce hospital visits by 38% and inpatient stays by 19%.
Evaluation of the effectiveness of a specialist nurse in the management of inflammatory bowel disease (IBD)

5. Priorities for Change

The review identified 4 key areas of focus highlighting potential areas of change which include:

- Prevention & Self-Care (with a targeted education programme, helping to raise awareness on risk factors, identify symptoms and improve early detection, widespread adoption of making every contact count, signposting to support and advice to address risk factors);
- Detection & Diagnosis (increasing uptake to Bowel Screening Programme, targeting areas with lower uptake, adapting diagnostic pathway and access to new models to support earlier diagnosis, ensuring adequate diagnostic capacity to meet demand, development of pathways for non-cancer referrals to support early intervention);
- Treatment & Condition Management (with access prehabilitation and with optimal configuration of inpatient care to support enhanced recovery, access to expertise to support condition management);
- Whole System Approach (by developing a consistent approach to MDTs for cancer and non-cancer conditions and protocolisation to support timely signposting to intervention, opportunities for joint working, well interfaced systems to connect the MDT, including the patient, and enhanced use of emerging technology to innovate in the future).

Prevention and Self-Care	1 in 20 people will develop CRC in their lifetime. This assumes the underlying risk factors associated with cancer do not change and demographic changes linked to the aging population, levels of deprivation and ethnic diversity and linked health inequalities continue. Risk factors for CRC include obesity, with people who are obese 3 times more likely to develop cancer, 7% of cases linked to smoking and 6% linked to alcohol excess. Overall 54% of CRC could be prevented by adopting a healthier lifestyle. Risk factors can also increase risk of developing non-cancer conditions, with people who smoke twice as likely to get Crohn's Disease. Locally, 48,990 citizens have a BMI over 35kg/m^2. Smoking prevalence locally is above the ambition for 12% prevalence by 2022 set by the Department of Health and Social Care. Alcohol harm also represents a significant public health burden in the ICS, with alcohol related mortality 19.2 per 100,000, compared to 10.4 per 100,000 for England. Mitigating these high risk factors like obesity, smoking, diet and alcohol intake can play an important and very positive part in the prevention of cancer and long-term conditions and future health outcomes. A Population Health Management Approach (PHM) providing an opportunity to target interventions linked to health inequalities. It is important that the fundamentals of avoiding these risk factors and understanding the implication on health and wellbeing is clearly expressed in education and awareness programmes across the population. This includes consideration to access to trusted and approved resources to support prevention through increased awareness and signposting to advice and support. Education of HCPs across the ICS provides an opportunity to seek out teachable moments, with widespread adoption of Making Every Contact Count (MECC) and Identification and Brief Advice (IBA) to identify risk factors, provide brief interventions and signpost to support. Access to services to address risk factors are inconsistent across the ICS and an important consideration to enhance prevention opportunities. Education also supports the ambitions of supporting self-care for people with LTC. Opportunities to self-care continue to be underutilised, with 75% of people with functional bowel conditions having the opportunity to self-care. Education of healthcare professionals (HCP) to deliver consistent and evidence based practice (EBP) across all settings provides an opportunity to enhance self-care, with coordinated access to expertise to support patient activation and involvement in shared-decision making to enable self-care. An example of this being access to an IBD nurse via a helpline which can provide timely access to expertise and can reduce hospital visits by 38% and inpatient stays by 19%.

Detection & Diagnosis	Cancer survival is higher than it has ever been. One of the biggest actions to improve cancer survival is to diagnose cancer earlier. The NHS LTP makes a commitment to increase the proportion of people diagnosed at stage 1 and 2 from half to three quarters by 2028, to provide the best chance of curative treatment and long term survival. Greater awareness of symptoms provides an opportunity to accelerate diagnosis and treatment by maximising identification through screening. The Bowel Screening Programme, using the Faecal Immunochemical Test (FIT) was implemented in response to rising 2 Week Wait (2WW) referrals and challenges of rising demand for endoscopy resulting in significant challenges to capacity. It is non invasive, safe and inexpensive, costing £4.81, and can be done in the home. The NHS LTP has committed to modernising the programme to detect more cancers earlier. FIT is now easier to use and has increased detection rates by 7%. At present only people aged 60 and over are eligible for FIT, but the NHS LTP makes a commitment to roll this out to all people over 50 years of age, to capture 94% of people diagnosed with CRC. In addition there is an aim to increase uptake in men, people from ethnic minority groups and in deprived areas. Locally, most areas of the ICS have statistically higher take up than the England average, with the exception of Nottingham City which is in the lowest quartile for uptake. Inclusion of FIT in diagnostic pathways provides an additional opportunity to increase earlier diagnosis of CRC. A recent NICE FIT study has shown that FIT demonstrates 98% sensitivity in diagnosing CRC for people with both low and high risk symptoms and identified 3.6% of cancers, meeting the NICE threshold. Inclusion of FIT in the diagnostic pathway with the development of algorithms to support risk stratification and prioritise further diagnostic tests, provides an opportunity to reduce 2WW referrals by 60% whilst diagnosing 98% of CRC. FIT mandated in the 2WW referral pathway can therefore support earlier diagnosis. Further opportunities exist to support earlier diagnosis through the implementation of Straight to Test (STT) colonoscopy. Review of 2WW referrals by a clinician or clinical nurse specialist (CNS) has been shown to reduce time to first test from 22 days to 13 days, reduce referral date to diagnosis from 24.5 days to 17 days and reduce the need for clinic attendance. A One Stop diagnostic model for imaging, aided by advanced practitioner radiographers authorisation and stringent documentation, further enhances the time to diagnosis and signposting to treatment. Locally, referral pathways which include FIT, STT and One Stop models are not equitably available across the ICS, with opportunities to extend to support the ambitions of earlier diagnosis across cancer and non-cancer pathways. The NHS LTP has set out an ambition to radically overhaul diagnostic services with the development of RDCs. The ICS Diagnostic Board is considering the development of RDCs locally, with an opportunity to join up diagnostic capacity for CRC as part of local implementation. Alignment with East Midlands Imaging Network (EMRAD) supports prompt reporting and visibility of images across all settings. 95% of referrals on the 2WW pathway are not diagnosed with CRC, with current pathways not efficient following negative FIT. Locally 10% of people with high risk symptoms will have another cancer replicating national studies. Functional disorders and IBD can also present with similar symptoms to cancer. Timely diagnosis increases the range of treatments available, improves outcomes and reduces complications. Functional bowel disorders represents a significant proportion of secondary care referrals. Opportunities exist to develop systems to improve healthcare through simple first line diagnostic tests and enhancing quality of referrals. The inclusion of Faecal Calprotectin (FC) in the diagnostic pathway, as well as FIT, can reduce diagnostic waiting time and unnecessary tests, unlocking capacity, reducing costs (£55m to £266m nationally) and improving access to services. Developed pathways in Yorkshire and Humber has shown a 40-70% reduction in new OP appointments and a 21-50% reduction in colonoscopies. Developing pathways for patients to signpost to appropriate expertise and treatments can reduce future referrals and appointments. Nottingham Digestive Diseases Interface, with consultant assessment of referrals, has resulted in 22% of patients being discharged before moving to secondary care with advice only or following a secondary care diagnostic test. The inclusion of simple tests in the referral pathway, access to advice and guidance (A&G) and pathway for onward referral for routine referrals supports a reduction in secondary care referrals. Consideration of a routine and expedited pathway (including MDT), for people with high risk symptoms following rule out of CRC navigates people to the right expertise and treatment, further reducing future referrals and OP attendances.

Treatment & Condition Management	Evidence suggests that of patients undergoing treatment, including surgery, less fit patients are more likely to die or have more complicated recovery, so fitness can affect overall outcomes. Prehabilitation is the practice of enhancing a patient's functional capacity before surgery with the aims of improving outcomes. Targeted interventions can maximise resilience and lead to reductions in length of stay, postoperative pain and complications as well as providing an opportunity to improve long term health. The time between diagnosis and surgery represents a teachable moment and empowers patients to make changes to their health behaviour producing lifestyle modification through medical optimisation, smoking cessation, advice on alcohol consumption, physical exercise, nutritional and psychological support. Locally, there is not a consistent approach to prehabilitation, but a pilot at NUH has predicted a 287 bed day and £71,750 cost saving. Opportunities exist to deliver prehabilitation at diagnosis to support timely access in lifestyle interventions, nutritional assessment, psychological support and physical activity. A risk stratification approach provides an opportunity to develop a prehabilitation offer across settings and building on existing services, such as local gyms and fitness instructors. Systematic Care of Older People in Elective Surgery (SCOPES) already offers optimisation before surgery, with opportunities to develop a combined offer with prehabilitation. Access to rehabilitation following surgery provides further opportunity to prevent deconditioning and enhance health and wellbeing. Optimising surgical pathways provides an opportunity to enhance outcomes. The Royal College of Surgeons highlight that the separation of elective and emergency surgery can have significant benefits including earlier treatment and better continuity of care. Novel surgical techniques, such as robotic surgery, are evidenced to reduce length of stay. The risk of complications are reduced with the principles of Enhanced Recovery After Surgery (ERAS) achieving a 2.5 day shorter length of stay. The NHS LTP has also highlighted the ambition to enhance Same Day Emergency Care (SDEC). At NUH emergency triage and access to clinician assessment at the front door has resulted in a 15% reduction in inappropriate referrals and 57% same day discharge. Access to expertise closer to home is an important consideration for patients with long-term conditions to support overall condition management and to improve quality of life.1 in 7 adults are affected by constipation, both acute and chronic, with £168 million spent by the NHS in England in 2018/19 treating the condition, with a 7% increase on the previous year. In addition to constipation, 10% of the population are affected by faecal incontinence causing social isolation and poor mental health. The scope to undertake a detailed assessment provides an opportunity to address reversible factors. When this fails to restore bowel function or continence a structured approach to management supports the coordination of care, including the provision of training and support for patients and carers including emotional and psychological support. The development of a bowel pathway across primary, community and secondary care supports the delivery of person-centred coordinated care, with benefits to GP attendances, referrals and admissions to secondary care. Where this exists nationally admissions and bed days saved have been between 7,200 and 16,000 on average. Locally, the uro-gynaecology pathway built on similar principles resulted in a 65% decrease in routine and 60% decrease in urgent referrals over one month to secondary care. Locally, a continence service is accessible but with differences in services offered. The service supports people with constipation and faecal incontinence, providing assessment, treatment, management and a prescribing service for trans-anal irrigation products, with an opportunity to develop prescribing guidelines to support appropriate use of these products. Opportunities exist to develop a consistent offer across the ICS with a joined up approach, with clear transitions across primary and secondary pharmacology and appliance management. Stoma care locally is delivered by a community Local Appliance Service, with 2,770 people with a stoma in the ICS. The service supports a reduction in wastage and inappropriate prescribing through access to a local prescribing formulary. The service also supports ongoing review and monitoring to improve condition management, reduce attendances in acute care and enhance quality of life. Opportunities exist to incorporate pathways for stoma formation through to long term care, including psychological support, aligned with acute delivery. Joint working supporting access to expertise over 7 days, with local evidence of reductions in length of stay for emergency cases by 14 days. Getting It Right First Time (GIRFT) has highlighted a 25-75% variation in assessment for reversible stomas within 18 months, achieving this goal improving costs and quality of life. The service supports a person-centred model of care, but with further opportunities to enhance joint working and seamless transitions of care through enhanced collaboration with acute care.

5. Priorities for Change

Whole System Approach	The NHS LTP makes a commitment to supporting joined up, coordinated care and increase the support available to people with long term conditions. Creating a multidisciplinary team interface between primary, community and secondary care teams supports the ambition of coordinated care and enhanced holistic care planning. A patient-centred plan of care with better shared decision-making supports timely access to treatment and support, care closer to home and enhanced communication between HCP and the patient. Locally, a colorectal cancer (CRC) MDT is embedded to support navigation through the pathway. MDTs also exist for some non-cancer colorectal conditions, but with scope to extend to future teams, such as that developed to support the expedited pathway following rule out of CRC, with a consistent approach to delivery to achieve the benefits of MDT teams. This includes consideration to the skills and expertise represented in teams, with opportunities to incorporate GP, either through a generic specialist purely for MDT liaison or to invite the patient's own GP where there if felt to be value in doing so. Bringing the colorectal system together supports an equitable and consistent approach, whilst maintaining personalised care. GIRFT recommends that optimal care pathways already defined in guidance should be implemented locally, reducing unwarranted variation in decision-making, outcomes and productivity. Locally, there is variation in pathway implementation to EBP with an integrated partnership approach supporting the development of a consistent and equitable approach. This also provides an opportunity to exploit joint working opportunities across the system. Systems need to be developed to support effective communications between primary, community, secondary and social care providers. This requires innovative use of technology, virtual and remote appointments to provide care closer to home where appropriate. Some investments have been made to help tailor solutions for the ICS including support sharing of patient information through platforms such as patient knows best (PKB). Further consideration is required to develop interfaces across multiple systems to support visibility of information to support decision-making. Specific opportunities exist for colorectal services, including: • Use of EHealthScope to support a Population Health Management approach to address risk factors • Enhancing patient initiated, rapid access and virtual follow up for people with long-term conditions, building on access to an IBD helpline, with mechanisms to adjust and tailor monitoring electronically • Remote follow up for CRC, delivering surveillance without the need for an OP appointment • Protocolisation of CRC MDT - with a risk stratified approach to support timely navigation to diagnostics and treatment, with an interactive component with the patient and access to bespoke and individualised assessments Further opportunities exist from the development of novel technology, such as Robotic Processing Automation (RPA) and consistent coding support navigation through the pathway and to inform future pathway developments.

6. Proposed future care system

Home

Planned/Scheduled

Prevention and Self-Care – Risk Factors, Education
- Diet, exercise, fluid – education of risk factors starting in schools
- EHealthScope to support Population Health Management Approach
- Public campaigns to increase awareness of risk for cancer and non-cancer conditions
- Focus on signposting to information to reduce risk – diet, obesity and smoking
- Reinforce National Programmes e.g. NHS website information/ obesity 12 week programme/Couch to 5k/Change 4 Life
- Active signposting following bowel screening – at present advises lifestyle intervention can reduce risk but does not proactively signpost
- Access to trusted and approved information as above via (NHS App/PKB) to support condition management and self-care
- Person-centred care – 'involving me in decisions about me'
- Giving the right information at the right time to activate person to self-manage
- Signposting to mental health support
- Signposting to peer support groups – working together with 3rd sector

Sustainable by:
- Improved support and understanding of risks allows earlier understanding and prevention
- Promotes awareness , self-care and independence

Detection & Diagnosis – Bowel Screening Programme, Referral & Triage, Early Diagnosis & Intervention, Non-Cancer Diagnosis
- Increase uptake to screening for CRC through enhanced communication and a simpler test already resulting in 10% increase in uptake
- National and local campaigns to continue to increase uptake, targeting groups with lower uptake

Sustainable by:
- Earlier detection through widespread screening programme
- Earlier signposting to diagnosis and intervention to improve outcomes

Treatment & Condition Management – Prehabilitation & Best Surgical Pathways, Continence and Stoma Care, Coordination of Care in the Right Place
- Information and resources to support home based prehabilitation offer - risk stratified and aligned with community and acute offer
- Signposting to information and support to optimise health for treatment
- Resources to support self-assessment of nutritional risk and access to first line interventions
- Telephone advice and support via local appliance service
- IBD helpline to respond to queries
- Helpline to get access to advice quickly

Sustainable by:
- Improved condition management to support self-care, confidence and reduce overall healthcare use

Whole System Approach –System Configuration and Interfaces, Consistent Evidence Based Pathways
- Virtual connection with HCP e.g. video consultations
- Patient access to health information to connect with HCP and support shared decision-making
- Patient initiated follow-up – risk stratified implementation
- Information visible between the patient and team to support decision-making to person-centred principles

Sustainable by:
- Promoting self-care and independence through enhanced shared-decision making
- Reduced outpatient attendances

Urgent – 24 hours

Treatment & Condition Management
- Access to telephone advice and support for stoma care
- District Nursing advice available over 7 days to support continence care
- IBD Helpline to respond to queries

Sustainable by:
- Supporting self-care and improved condition management
- Reduces future demand on urgent care

Emergency/Crisis – 4 hours

Colour KEY to information source: Steering Group/ Workshop 1 Evidence Document/ Guideline Patient Focus Groups

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6. Proposed future care system

Planned/Scheduled	Urgent – 24 hours	Neighbourhood	Emergency/Crisis – 4 hours
Prevention and Self-Care – Risk Factors, Education • Working with the population to increase uptake to bowel screening • MECC to address risk factors and signpost to advice and intervention • Access to smoking cessation and weight management services Sustainable by: • Encourages early diagnosis at stages 1 and 2 • Improved use of technology			
Detection & Diagnosis – Bowel Screening Programme, Referral & Triage, Early Diagnosis & Intervention, Non-Cancer Diagnosis • Consistent access to triage and advice and guidance - NDDI service • E Referral templates to strengthen referral and triage as current referrals open to interpretation • FIT within diagnostic pathway, working across settings to support increasing uptake via population awareness and education • Standardising FIT values and scoring system to identify high risk - opportunity to develop rule out to support signposting to correct pathway – linked to BSG and ACP guidance • Faecal Calprotectin within diagnostic pathways • Bowel pathway to support referral, diagnostics and to signposting to intervention in the correct setting • Road map for diagnosis and navigating to the right team to get to the right support first time • Education of GP and PC to support referrals • Optimal diagnostic strategies based on individual risk stratification e.g. FIT/FC • Diagnostic capacity aligned with the development of Rapid Diagnostic Centres in each of the ICPs • Increased use of Capsule Endoscopy with consideration to reporting of results Sustainable by: • Encourages early diagnosis at stages 1 and 2 • Reduces OP attendances and supports early intervention	Detection & Diagnosis • Optimal diagnostic strategies based on individual risk stratification by FIT/FC Sustainable by: • Earlier intervention	Detection & Diagnosis • Optimal diagnostic strategies based on individual risk stratification by FIT/FC Sustainable by: • Earlier intervention	
Treatment & Condition Management – Prehabilitation & Best Surgical Pathways, Continence and Stoma Care, Coordination of Care in the Right Place • Prehab in the community aligned with risk stratification approach and acute delivery • Exercise rehabilitation instructors (model similar to pulmonary rehabilitation) - consideration of active health overview for all conditions, with additional components for prehab • Support and information to prepare for surgery • Nutritional assessment embedded in PC to support early identification of risk • Referral pathway and consistent access to dietetic assessment/treatment for those with high risk • Consistent and equitable access to continence service • Support for continence care to improve quality of life • Developed bowel pathway to support intervention and reduction in referral to acute settings e.g. for consultant only prescription • Formulary for continence prescription products e.g. rectal irrigation similar to stoma care • Equitable and consistent discharge pathway to LAS service across the system on discharge following stoma formation • Support from stoma service , virtual or F2F, including mental health support, dietary information and links to peer support • Access to stoma preformation advice, including psychological support. • Collaborative working/combined team with acute setting to support a person-centred approach • Local prescribing formula for stoma products based on principles of shared decision-making and person-centred care – embedded in management programme and service design • Knowing the range of appliances available to determine the best for the person Sustainable by: • Timely access to specialist advice and coordination of care to support condition management • Health optimisation before surgery to improve recovery	Treatment & Condition Management • 7 day access to stoma advice and support Sustainable by: • Supports self-care • Reduces future demand on urgent care		
Whole System Approach – System Configuration and Interfaces, Consistent Evidence Based Pathways • Pathways across the system to support implementation of evidence-based practice • Collaboration across community and acute settings supporting HCP to HCP referral e.g. dietitian • Opportunity to develop combined models e.g. LAS with acute stoma care team Sustainable by: • Supports consistent and coordinated care			

Colour KEY
to information source: Steering Group/ Workshop 1 Evidence Document/ Guideline Patient Focus Groups

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6. Proposed future care system

Acute

Planned/Scheduled	Urgent – 24 hours	Emergency/Crisis – 4 hours
Prevention and Self-Care – Risk Factors, Education • MECC embedded in practice - for all risk factors e.g. obesity/smoking/alcohol. • Education of workforce to build awareness and confidence in conversations • Capture signposting on systems with a link between settings – Active Hospitals Programme • Access to information/services to signpost people to and awareness of these • Prevention hub but has to link to community intervention Sustainable by: • Improves prevention and health optimisation		Prevention and Self-Care • IBA for alcohol in ED Sustainable by: • Improves prevention
Detection & Diagnosis – Bowel Screening Programme, Referral & Triage, Early Diagnosis & Intervention, Non-Cancer Diagnosis • Pathway for patients not diagnosed with CRC on 2WW – consideration of CT where appropriate to signpost to correct team • Referral between pathways to access the right support • Straight to Test across the system • One Stop Diagnostics (OSCAR at NUH) across the system with access to radiology, admin and CNS • Developing a digital pathology process • Diagnostic capacity linked to the development of Rapid Diagnostic Centres Sustainable by: Encourages earlier diagnosis at stages 1 and 2	Detection & Diagnosis • 7 day access to diagnostics with clear pathways Sustainable by: • Encourages earlier diagnosis and intervention	Detection & Diagnosis • Access to diagnostics e.g. Interventional Radiology, stenting for endoscopy with clear pathways Sustainable by: • Encourages earlier diagnosis and intervention
Treatment & Condition Management – Prehabilitation & Best Surgical Pathways, Continence and Stoma Care, Coordination of Care in the Right Place • Separation of emergency and elective care to support pre and post operative Enhanced Recovery • Care on the right ward with the right expertise • Increased use of robotic surgery • Dedicated prehab aligned with community delivery and risk stratification principles at diagnosis with ability to refer between – inclusive of nutritional assessment, high intensity exercise and psychological support • Signposting to rehabilitation advice and support • Pathway for referral following rule out of CRC – expedited if symptoms with ability to refer to continence service • Clear pathway for stoma care from preformation to referral to LAS at discharge • Stoma care and education with developed links with LAS, opportunity for enhanced collaborative working/combined team • Signposting to the community LAS before discharge • Links with 3rd sector to support understanding of stoma care and access to peer support – at the right time for the person • Consistent use of local prescribing formula for stoma and rectal irrigation products based on principles of shared decision-making and person-centred care • Access to psychological support pre stoma formation – with interface in hospital to community provision Sustainable by: • Reduces length of stay • Improves access to specialist advice and coordination of care	Treatment and Condition Management • 7 day access to stoma nurse advice and support • Surgical triage unit • Physician Associates supporting delivery of care Sustainable by: • Reduces admissions • Reduces length of stay	Treatment and Condition Management • ED referring for specialist advice via electronic systems with a developed model to signpost to right setting Sustainable by: • Reduces admissions • Earlier intervention
Whole System Approach – System Configuration and Interfaces, Consistent Evidence Based Pathways • Pathways across the system that implement evidence-based practice and deliver equity of access e.g. STT, One Stop Diagnostics • Communication and coordination between teams • Enhanced collaboration between acute and community settings • Development of MDT with protocolisation to enhance efficiency • Interoperability of systems to support continuity of care Sustainable by: • Improves coordination of care/ shared decision-making		

Colour KEY
to information source: Steering Group/ Workshop 1 Evidence Document/ Guideline Patient Focus Groups

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Future Care System – Summary

Integrated Care System
Nottingham & Nottinghamshire

www.healthandcarenotts.co.uk @NHSNottingham

Availability / Level of Care	Acute/ MH Hospital	Neighbourhood	Home
4 hours or less – 24/7	• IBA for alcohol in ED • Access to diagnostics in ED - Radiology • Referral from ED to specialist advice via electronic systems		• 999 response - awareness of when to contact e.g. perforation, autonomic dysreflexia
Urgent Care/ within 24 hours – 7 days	• Access to diagnostics – Endoscopy, Radiology, Pathology • Access to stoma nurse advice and support • Surgical triage unit • Physician Associates supporting delivery of care to prevent admissions	• 7 day access to stoma advice and support	• Telephone advice and signposting for stoma care • District Nursing triage, advice and intervention for continence/constipation • IBD Helpline
Scheduled – Appt based	• MECC and IBA embedded in practice for all risk factors • FIT within diagnostic pathway, standardising values and scoring system to identify high risk with opportunity to develop rule out • Pathway for patients not diagnosed with CRC on 2WW aligned with bowel pathway • STT and One Stop diagnostics across the system with a digital pathology process • Diagnostic capacity linked to the development of RDC – Endoscopy, Radiology, Pathology • Configuration of emergency and elective care to support Enhanced Recovery • Increased use of robotic surgery • Equitable access to prehab with risk stratification and referral pathway at diagnosis • Dedicated prehab and dietetic services aligned with community delivery • Access to stoma care and education as an inpatient with developed links with LAS for preformation assessment, psychological support and referral at discharge • Consistent use of local prescribing formula for stoma and continence products • Shared care for medication formulary • Pathways across the system that implement EBP with an MDT to enhance collaboration and support shared decision-making • Interoperability of systems	• MECC and IBA to address risk factors with access to services e.g. smoking cessation , substance misuse and weight management • Consistent use of FIT testing in people suspected of CRC • Increased uptake of bowel screening programme • Consistent access to triage and advice and guidance with education of GP and PN • Diagnostic capacity aligned with the development of RDC - Radiology and Endoscopy, with optimal diagnostic strategies based on individual risk stratification by FIT/FC • Future consideration to capsule endoscopy • Access to prehab in the community e.g. exercise instructors, aligned with risk stratification approach and acute offer • Nutritional screening embedded in PC with a referral pathway and consistent access to dietetic assessment and treatment • Psychological support e.g. IAPT • Bowel pathway to support referral, diagnostics and signposting to intervention • Equitable service offer across continence services • Equitable and consistent stoma service, with preformation advice, including psychological support, and a discharge pathway to LAS • Consistent use of local prescribing formula for stoma and continence products • Co-ordination and collaboration across settings, with interoperable systems	• Education and public awareness campaign, starting in schools, to raise awareness of lifestyle - diet, exercise, fluid • Systematic and consistent IBA to address alcohol as a risk factor • Consistent signposting to information to reduce risk – diet, obesity and smoking e.g. Obesity 12 week programme/Couch to 5k/Change 4 Life • Proactive signposting following bowel screening – incorporating access to lifestyle interventions linked to risk factors • Access to trusted and approved information as above via (NHS App/PKB) to support condition management and self-care • Increased uptake to screening for CRC through enhanced communication with national and local campaigns to continue to increase uptake • Information and resources available to support prehabilitation with reminders to prompt action • Self-assessment of nutritional risk and access to first line interventions • Telephone advice and support via local appliance service and IBD helplines • Implementation of patient initiated follow-up

Prevention through widespread **education and awareness** across the ICS and access to lifestyle interventions to reduce risk:
•Education and awareness
•Widespread adoption of making every contact count
•Access to information and signposting to services

Med Priority

Far more needs to be done to raise awareness amongst the population, from addressing risk factors through to helping people manage their long-term conditions. Led by Public Health (PH), education of the population to increase understanding of the risk that may impact their future wellbeing and how some lifestyle choices, such as obesity and smoking, can present much increase risk of developing cancer or long-term conditions. This includes awareness to be able to recognise early signs and symptoms that need further investigation.

Access should be readily available to trusted and approved sources of information (e.g. NHS App/PKB) to support ambitions to raise awareness. Self-management tools should also be promoted as approved resources available for people to complement the existing Face to Face (F2F) offer and support self-care.

Education of the workforce equips them with information to have brief conversations with people, when appropriate and when they recognise that someone may be at increased risk, increasing their confidence in providing brief interventions and signposting to support and advice.

Awareness of information and services to signpost people to is inconsistent across the ICS. Increasing awareness of the workforce of what is available supports proactive signposting to address lifestyle risks. For some lifestyle risk factors, such as obesity, there is an inconsistent and limited offer available, requiring a multi-agency review to ensure access and coverage across the ICS.

Impact & Benefit

- Improved prevention and earlier diagnosis and downsizing of cancers
- Earlier intervention for cancer and non-cancer conditions
- Improved survival

Alignment – To support prevention through widespread education and awareness alignment and delivery should be at an ICS level to support a consistent approach.

Early detection and **rapid access to diagnostics** across the system to support early intervention:
•Uptake to screening programme
•Use of FIT and Faecal Calprotectin in diagnostic pathway
•Access to straight to test and one stop
•Diagnostic capacity linked to Rapid Diagnostic Centres
•Pathways for non 2WW wait referrals

High Priority

As prevention and self-care approaches develop, more needs to be done to detect and diagnose to support the ambition of early intervention. This includes targeting areas of lower uptake to the Bowel Screening Programme to achieve consistent higher quartile uptake across all areas of the ICS. For patients currently referred on the 2WW pathway 95% will not have CRC. FIT has been evidenced to support diagnosis of CRC for low and high risk symptoms, with opportunities to use as a rule out. The development of algorithms and mandated inclusion in the referral pathway provides a simple diagnostic measure to support timely diagnosis and reduce burden on more invasive diagnostics. Faecal Calprotectin is another simple diagnostic measure that can support rule out by distinguishing between IBD and functional bowel disorders. The inclusion of both measures in the referral pathway for colorectal and gastroenterology supports navigation to the right pathway and expertise first time, reducing unnecessary diagnostic procedures and OP appointments.

As simple measures to support timely diagnosis are embedded in the pathways, further opportunities exist to reduce time to diagnosis and treatment through the implementation of STT and One Stop Models across cancer and non-cancer pathways across the ICS, where currently this only exists for the CRC pathway at NUH. This requires consideration to the capacity and skills of the workforce, including CNS, advanced radiographers and radiologists, to deliver this approach. Emerging roles such as physician associates and surgical care practitioners can also support this model.

The development of RDCs is being led locally by the ICS Diagnostic Board. Diagnostic capacity for future colorectal services should include workforce capacity and skills and digital reporting, including links with EMRAD, supporting timely reporting and visibility of images across settings to support decision-making. Links to the EMCA will continue to inform future diagnostic requirements and opportunities, such as learning from the national programme of work considering and testing the principle of capsule endoscopy.

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Early detection and **rapid access to diagnostics** across the system to support early intervention:
•Uptake to screening programme
•Use of FIT and Faecal Calprotectin in diagnostic pathway
•Access to straight to test and One Stop
•Diagnostic capacity linked to Rapid Diagnostic Centres
•Pathways for non 2WW wait referrals

High Priority

Continued…

Pathways for non 2WW referrals presenting with low and high risk symptoms (e.g. weight loss, anaemia), via routine and expedited pathways, provides an opportunity to proactively signpost to advice and treatment, reducing the number of diagnostic procedures, OP appointments and delays to treatment. Nottingham Digestive Diseases Interface, with consultant assessment of referrals, has resulted in 22% of patients being discharged before moving to secondary care with advice only or following a secondary care diagnostic test. Extension of this to colorectal and inclusion in guidance on the E Referral Service (ERS) and education of HCP in primary care supports navigation to the right pathway first time. Locally, pathways are inconsistent across Nottingham and Nottinghamshire, with opportunities to develop a consistent approach.

For patients with high risk symptoms of unknown cause, following rule out of CRC and IBD, an expedited pathway supports access to expertise to determine further diagnostic procedures, navigation to timely treatment and onward referral for ongoing support. The development of an MDT with the relevant skills and experience supporting coordinated access to expertise.

Impact & Benefit

- Earlier diagnosis and intervention with equity of access
- Efficiencies from new roles
- Risk stratification of referrals reducing the high number of referrals for cancer that are not cancer

Alignment – To support early detection and diagnosis and navigation to the right pathway with a consistent approach and equity of access alignment should be at an ICS level, with more local delivery at an ICP level

Optimal perioperative pathways to support **enhanced recovery:**
•Prehabilitation offered across the system at diagnosis
•Separation of elective and emergency care
•Novel surgical techniques
•Rehabilitation

High Priority

A robust and sustainable prehabilitation programme is required across the ICS. This can help improve outcomes following surgery by optimising health and fitness when offered at diagnosis. Prehabilitation programmes includes access to interventions such as physical activity, psychological support, nutritional assessment and support and behavioural change prior to treatment. SCOPES also undertakes an assessment of frailty, with an opportunity to combine in a future prehabilitation offer. Variation in health status at diagnosis supports a risk stratification approach to target interventions based on risk, with flexible methods of delivery, such as virtual education and signposting to lifestyle interventions, through to Face to Face intensive programmes for people with higher risk. Existing programmes, such as cardiac and pulmonary rehabilitation, and services e.g. fitness instructors in gyms can support the development of a prehabilitation model across the ICS with risk stratification defining access across settings. Collaboration and seamless transitions between settings supports the ambition to offer prehabilitation across the ICS. Extension of the model across other surgical specialities providing further opportunity to enhance surgical outcomes.

Optimisation prior to surgery is one of the components of care to improve outcomes. Novel surgical techniques, such as robotic surgery, supports enhanced outcomes when compared to laparoscopic surgery with a reduction in median length of stay by 1 day. Consideration to care following surgery is also evidenced to enhance recovery, through better coordination of care, reducing complications and length of stay. An important component of enhanced recovery is the separation of urgent 'hot' activity with routine 'cold' activity, to further improve surgical outcomes. Enhancing SDEC consistently across the ICS provides a access to timely advice, resulting in reductions in inappropriate referrals and admissions. Post operative rehabilitation, which includes the components of prehabilitation supports a return to health and wellbeing and promotes self-management.

Impact & Benefit

- Optimising health before and after treatment to improve outcomes
- Reduced complications
- Reduced length of stay

Alignment – Improving the offer of prehabilitation and separating elective and emergency inpatients should be aligned at an ICS level to deliver a consistent approach, with more local delivery at an ICP level

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7. Transformation Proposal

Consistent and **equitable access** to **expertise** to support condition management:

- Equitable and coordinated continence support with guidance for use of continence products
- Stoma pathway from preformation to discharge
- Access to local medication and appliance formulary
- Helplines to support self-management

High Priority

As the colorectal transformation proposals evolve supporting prevention, detection, diagnosis and referral for treatment, more needs to be done to support consistent and equitable access to expertise to support condition management. A continence service supports detailed assessment of patients, increasing opportunities to reverse symptoms. Structured support including assessment, treatment, management and training for patients and carers, optimising condition management and quality of life. The development of a bowel pathway across settings, underpinned by shared decision-making conversations, supports the delivery of person-centred coordinated care and access to the continence service. Locally, services offered are not equitable across the ICS, with opportunities to develop a consistent offer. A LAS provides consistent support for patients with a stoma. Opportunities exist to incorporate pathways for stoma formation, assessment for reversible stomas through to long term care, including psychological support. Redesign and implementation of a revised pathway provides an opportunity to enhance collaboration across acute and community settings, supporting seamless transitions and coordination of care and access to expertise over 7 days.

Local formularies are accessible for stoma products, consistent use across settings will support person-centred coordinated provision. The development of prescribing guidelines for trans-anal irrigation products supports the appropriate use of these products. Access to prescribing formula for medication supports the ambition of shared decision-making in the supply of medication to support a person-centred approach.

IBD nurses have been evidenced to reduce hospital visits by 38% and inpatient (IP) stays by 19%. Consistent access to IBD helplines provides timely access to advice and treatment, with opportunities to incorporate the principles of patient activated virtual follow-up.

Impact & Benefit

- Earlier intervention
- Care closer to home
- Enhanced self-management

Alignment – To ensure consistent and equitable access, this proposal should align at an ICS level, with delivery more locally at ICP level

Consistent model and approach for **Multidisciplinary teams** across the system:

- Non-cancer MDT to recognise support
- MDTs includes GP representation
- Protocolisation of cancer MDT
- Joint working across the system

Med Priority

MDT meetings should aim to optimise management and improve pathways for patients by improving communication between providers across settings and disciplines also promoting the benefits of holistic care across the pathway. An MDT can allow discussion of complex patients perhaps characterised by (multiple) comorbidities, frequent exacerbations and admissions, social and mental health problems, unclear diagnosis and suboptimal responses to interventions. The CRC MDT is embedded in practice and supports timely navigation through diagnosis to treatment. Protocolisation provides an opportunity to stratify patients according to risk, navigating those at low risk to a standardised pathway to support timely decision-making, releasing MDT capacity to discuss patients with more complex needs.

The inclusion of a GP bridges the required interface between primary and secondary care settings to support holistic discussion regarding patients with more complex needs. This may be better served by having a GP representatives from the PCNs. With the resulting improvement in education and awareness of GPs this can help with proactive and early intervention in primary care, leading to earlier detection and interventions with fewer emergency presentations.

The model and approach is embedded in the CRC MDT. Extending this to non-cancer conditions, especially for patients with long term conditions, recognises the support of an MDT in coordinating care across settings, with seamless access to treatment and support to deliver holistic, person-centred coordinated care.

Bringing expertise together across the system also provides an opportunity to exploit future joint working opportunities

Impact & Benefit

- Supports coordination of care and signposting patients to the right setting first time

Alignment – Delivering a consistent model and approach for MDTs across the system requires alignment and delivery at an ICS level

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7. Transformation Proposal

Enhanced **digital offer** and use of emerging **technology**

- Interfaces to support visibility of information
- Electronic processes to support early intervention
- Consistent coding
- Access to novel technology

High Priority

Developing pathways and MDTs for colorectal services supports the ambition of person-centred coordinated care. Optimal pathway and MDT configuration is supported by the implementation of EBP, which in turn supports a consistent and equitable approach across the ICS, reducing unwarranted variation in decision-making, outcomes and productivity. Locally, there is variation in pathway implementation to EBP with opportunities to further develop MDT function across cancer and non-cancer to develop an integrated partnership approach to minimise unwarranted variation, but also providing an opportunity to exploit joint working across the system. Protocolisation of the MDT function enhances efficiency through a risk stratified approach. Technological solutions, including access to an interactive component with the patient, enables the approach, with task assignment, ongoing monitoring and signposting to bespoke and individualised assessments where required.

Improving access to patient information for care providers can improve outcomes, but different digital systems across the ICS makes this difficult. Commissioners and providers should consider the current IT infrastructure and how it can be improved to support visibility of information and allow timely interchange of information. This may mean consolidation of existing IT systems in use, or to consider the interfaces between systems, but the key is to allow instant sharing of vital information to allow timely decisions to be made reducing avoidable delays for patients between services and settings.

Connected Notts has been instrumental across the ICS in improving health information developed and shared to enhance quality across health and care services. This has included the development of electronic processes, such as the optimal use of the GP referral guidance service (F12) and GP Repository for Clinical Care linked to eHealthscope to inform of particular needs in any area of the ICS. Public Facing Digital Services, allows citizens access to manage their Health and Care online through the NHS App and Patients Know Best (PKB) platform. Enhancing patient facing and virtual appointments at scale provides further opportunities to provide efficient and timely support through the widespread implementation of PIFU, surveillance and monitoring e.g. polyp monitoring programme. These and other electronic processes, such as visibility of diagnostic images and links to EMRAD, supports decision-making and earlier intervention. Consistent coding of activity in the colorectal pathway and the consistent use of digital databases is fundamental to support understanding of future demand and to continue to evolve colorectal services.

Novel technologies, such as RPA, provide future opportunities through Artificial Intelligence (AI) to automate processes to further enhance navigation through the pathway to support the ambitions of timely referral, diagnosis and early intervention to enhance outcome and experience.

Impact & Benefit

- Drives efficiency to support early intervention
- Supports outcome reporting to inform service improvements

Alignment – To ensure an equitable approach across all areas, the consistency of this proposal should align and be delivered at an ICS level

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Colorectal Transformation Proposal

Transformation Proposals	Priority (High/ Med/ Low)	Alignment (ICS/ ICP/ PCN)		Workforce	Technology	Estate/ Configuration	Culture	Finance/ Commissioning	Benefits (*Less than £20,000 per QALY is cost effective)
		Consistency	Delivery						
Prevention through widespread **education and awareness** across the ICS and access to **lifestyle interventions** to reduce risk: • Education and awareness • Widespread adoption of making every contact count • Access to information and signposting to services	MED	ICS	ICS	•PH to support education programmes on lifestyle and specific risk factors •Education in collaboration with continence service to increase understanding of regular bowel movement and ensure specificity to colorectal •Education of workforce to support adoption of MECC and IBA •Workforce capacity and education to address lifestyle risk factors	•Optimal use of NHS App/PKB to support education and access to lifestyle interventions e.g. Change4Life •Algorithms to educate citizens and patients on how to respond to a condition or symptom – link to PKB		•Everyone's responsibility to support principles of MECC and IBA •Cross-system working to understand approaches and consistent response linked to bowel movement	•Commissioning to support access to lifestyle interventions	• **Improved prevention** • **Earlier diagnosis and downsizing of cancers with earlier intervention** • **Earlier intervention for non-cancer conditions** • **Improved survival**
Early detection and **rapid access to diagnostics** across the system to **support early intervention**: • Uptake to screening programme • Use of FIT & Faecal Calprotectin in diagnostic pathway • Access to straight to test and one stop • Diagnostic capacity linked to Rapid Diagnostic Centres • Pathways for non 2WW referrals across the system	HIGH	ICS	ICP	•Targeting areas and population with lower uptake to screening •Nursing workforce for STT and One Stop with development of skills •Radiographer capacity and training to develop and maintain skills (test and reporting) to support retention •Medical workforce and admin roles for triage, remote activity and education •Physician associates and surgical care practitioners •Workforce for RDC, PC diagnosis and interaction with acute care •Training to underpin risk stratified approach for and future use of capsule endoscopy •Education in primary care through F12 function •Workforce to support expedited pathway and changes in activity •Continence service supporting triage – capacity and training	•Algorithms to ensure FIT and Faecal Calprotectin within diagnostic pathway for colorectal and gastroenterology •Potential use of capsule endoscopy •Technology to support digital reporting e.g. pathology to support rapid turn-around •Links with EMRAD •Optimal use of F12 function •ERS and DoS to reflect pathway changes	•Colocation of services to maximise flexible use of one stop principles •Aligned with development of RDC •To support STT and one stop models •Outpatient space for activity as defined in pathway •Accommodation space for team	•Cultural shift with adoption of new roles and not all F2F delivery •Joined up pathway before and after RDC, including exit strategy, to prevent bottlenecks •Defined links with EMRAD •-Joined up pathway from community hubs •Cross – organisational working and shift change as pathways are developed	•Funding and commissioning for roles •Funding and commissioning for expedited pathway •Routine pathway integrated via PCN structure	• **Efficiencies from new roles** • **Equity of access** • **Earlier diagnosis and intervention** • **Risk stratification of referrals to reduce high number of referrals for cancer that are not cancer** • **Reduced referrals to secondary care** • **Earlier intervention**

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Colorectal Transformation Proposal

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		Consistency	Delivery						
Optimal peripherative pathways to support **enhanced recovery:** •Prehabilitation offered across the system at diagnosis •Separation of elective and emergency care •Novel surgical techniques •Rehabilitation	HIGH	ICS	ICP	•Combined SCOPES and prehabilitation to identify frailty and provide advice/support – upskill physiotherapy with geriatrician support •Define risk stratification model across acute and community •Medical, nursing, therapy workforce to deliver model and consideration of generic role s e.g. exercise •Access to psychological support e.g. IAPT •Social Prescriber Role to support signposting •Education of workforce to deliver ERAS in elective and emergencies •Education to develop skills in robotic surgery	•Use of online, NHS App, QR codes, films to access tools to support intervention •Wearable devices e.g. step counters •Access to lifestyle interventions •Technology to support assessment e.g. frailty score, BMI •Interfaced systems for acute and community •Equipment and technology to support robotic surgery	•Consideration of delivery across acute and community •Acute - prehab delivered near pre-assessment •Community hub space for prehab delivered e.g. group sessions •Separation of elective and emergency – existing estate or new build •Ring-fenced elective areas	•System shift to working in MDT – trust in expertise and decision-making •Commitment to prehabilitation as soon as a patient enters the pathway •Cultural and psychological shift to make lifestyle change •Consideration to survivorship and quality of life and wellbeing after treatment	•Commissioning components of prehabilitation to include assessment and intervention •Funding to deliver workforce •Review of contracts to enable seamless transition between services	**•Optimising health before treatment to improve outcomes** **•Reduced complications** **•Reduced length of stay**
Consistent and **equitable access** to **expertise** to support condition management: • Equitable and coordinated continence support with guidance for use of continence products • Stoma pathway from preformation to discharge • Access to local medication and appliance formulary • Helplines to support self-management	HIGH	ICS	ICP	•Workforce to support equitable access to continence advice and support, including development of healthy bowel clinic •Local accredited courses for bowel care to support link nurse role and recruitment •Workforce for 7 day access to stoma advice using flexibly to provide advice and support across settings •Capacity to include pathway from pre-formation to long term care •Access to psychological support •IBD nurse capacity	•Technology to support helpline principles •Virtual consultations to complement F2F offer •Visibility of guidelines and formulary across settings	•OP clinic availability in community hubs	•Cross – organisational working models and coordination •Openness and transparency of risk and benefit to all parties •System adoption of trans-anal irrigation guidelines •Commitment to person-centre care and shared decision-making principles	•Funding and commissioning to support equity of access •Consideration to 3rd sector support and contract arrangements	**•Earlier intervention** **•Care closer to home** **•Enhanced self-management** **•Supports person-centred and appropriate prescribing, with shared decision-making** **•Supports patient activated virtual follow-up**

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Colorectal Transformation Proposal

Transformation Proposals	Priority (High/ Med/ Low)	Alignment (ICS/ ICP/ PCN)		Workforce	Technology	Estate/ Configuration	Culture	Finance/ Commissioning	Benefits (*Less than £20,000 per QALY is cost effective)
		Consistency	Delivery						
Consistent model and approach for **Multidisciplinary teams** across the system: • Non-cancer MDT to recognise support • MDTs includes GP representation • Protocolisation of cancer MDT • Joint working across the system	MED	ICS	ICS	•Development of MDT aligned with expedited pathway •Inclusion of PCN representative into MDTs	•Use of technology to support MDT communication and support of joint working •Technology to support protocolisation of CRC MDT		•Recognition of support of GP in non-cancer as well as cancer MDT •Opportunities to enhance joint working across settings •Culture of MDT working across pathways	•Funding and commissioning of MDT	**•Supports coordination of care and signposting patients to right setting first time**
Enhanced **digital offer** and use of emerging **technology** • Interfaces to support visibility of information • Electronic processes to support early intervention • Consistent coding • Access to novel technology	HIGH	ICS	ICP	•Scoping workforce efficiencies •Education and training on the use of technology •Development of skills to underpin function of robot	•Electronic ICD10 coding interfaced to database •RPA software (with AI) to support diagnostics, reporting and service delivery •Access to EMRAD data •Technology to support		•Cultural changes linked to the use of technology, robotics and AI	•Funding for novel technologies – including licenses, equipment, specialist IT knowledge	**•Drives efficiency to support early intervention** **•Supports outcome reporting and service developments**

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8. Enabling Requirements

Workforce	Enhancing the future health and social care for colorectal services, requires the following main considerations for workforce: • Widespread training of healthcare professionals (HCPs) to empower them to provide appropriate advice or signposting to address risk factors, promote healthy living and enable self-care – includes access to accredited courses • Capacity and education to develop and retain workforce to support diagnostic offer aligned with RDC, with consideration to medical, nursing, radiographers and administration roles • Education of primary care workforce to navigate referral pathways • Development of emerging roles such as physician associates and surgical care practitioners • Development of skills to support enhanced robotic surgery • Working with medical, nursing and therapy colleagues to develop a prehabilitation model for the ICS, with specific consideration to generic therapists and specialised therapists to support a risk stratified approach to delivery • Working closely with MH colleagues to improve access of psychological support across the colorectal pathway • Cross pathway working (Primary and secondary and community care) for clinicians and primary care practitioners with specific development and expansion of local MDTs
Technology	The main areas in which technology can effect transformation for colorectal include: • Support existing App developments/ promotions for signposting self-care resources or local services – based on NHS App/ PKB • Enhanced use of wearable devices and AI to support connections between the patient and HCP • Use of F12 and ERS to support pathway navigation and ambitions for earlier diagnosis • Digital reporting of diagnostic results and links with EMRAD to enable visibility of information to support decision-making • Increased access to robotic surgery • Enhanced use of technology to aid virtual delivery and connections between the patient and MDT • Digital integration - If it is accepted that a single IT system may not be deliverable in the long term then focus should be on connecting existing systems successfully – more to do with access and permissions through improved interfacing • Enhanced clinical coding and use of novel technology e.g. RPA to enhance navigation and inform ongoing service improvement
Estate	• To support a risk stratified approach to prehabilitation, access to space, both co-located with pre-assessment areas in acute setting and in the community is required – with consideration to the breadth of interventions delivered • Configuration of inpatient beds, within existing or new build, to separate emergency and elective care, with ring-fencing of beds to support elective activity • There is an emphasis on delivering some services more locally, with access to community hub outpatient space to deliver these closer to home • Rapid Diagnostic Centres, being rolled out nationally – incorporate future requirements for colorectal services as part of local implementation currently being considered by the ICS Diagnostics Board
Culture	• Cultural change to support prevention and sustained lifestyle changes, with consideration to both physical and mental health • Workforce to support the principles of everybody's responsibility • Commitment to the principles and benefits of prehabilitation • Shift in culture with the development of emerging roles, with trust in expertise and decision-making to optimise opportunities • Openness and transparency to risk and benefit for all parties • Cross-organisational collaboration and commitment to MDT working to support optimal access to expertise, seamless transitions of care across settings, with the principles of person-centred care and shared decision-making embedded • Cultural change to support the adoption of novel technologies within processes • Culture change to continue to consider survivorship, quality of life and wellbeing after treatment

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Integrated Care System
Nottingham & Nottinghamshire

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Colorectal Services Future Vision:

From…		Phase 1 1st year	Phase 2 2-3 years	Phase 3 5 years +	To…
• Limited education across the ICS population of risks • Inconsistent approach to making every contact count • Inconsistent education/ training of professionals across the system • Inequitable access to services to address lifestyle risk factors	Prevention & Self-Care	•Scoping what is available and education requirements to raise population awareness •PH to lead on an education strategy to support embedding MECC and IBA across the ICS •Mapping of current services to address lifestyle risk and agreement on future requirements	•Education plan developed and in place with access to trusted and approved information to support consistent delivery •Education programme of HCP in place and scaled up to support consistent delivery across the ICS •Development of services and workforce to support equitable approach	•Education embedded across the population with increased awareness of risk •Education programmes embedded with enhanced skills and confidence of HCPs in having MECC and IBA conversations •Services in place and considers health inequalities to address areas of highest risk	• Structured education programmes across the ICS population of risks • Consistent approach to making every contact count • Consistent education/ training of professionals across the system • Equitable access to services to address lifestyle risk factors
• Uptake to bowel screening and inconsistent inclusion of FIT in diagnostic pathway • Inconsistent STT and One Stop Models and diagnostic capacity • Insufficient diagnostic capacity for demand • Lack of defined pathways for non-cancer 2WW referrals	Detection & Diagnosis	•Targeted approach to areas with lower uptake •FIT and FC embedded in pathway and development of algorithms to support •Scoping STT and One Stop in Mid Notts •Plan resource/capacity for RDC •Develop expedited 2WW pathway model and determine workforce requirements	•Continued review of uptake to ensure health inequalities considered •Algorithms developed to support referral management, with education to support use •Initial access to RDCs •Implement STT and One Stop with recruitment and training •Implementation of expedited pathway for non-cancer	•Uptake across all areas of the ICS enhanced •FIT and FC embedded in colorectal pathway and seen as one diagnostic pathway •STT and One stop embedded across all of the ICS •RDCs actively supporting diagnosis and considers links to EMRAD and digital reporting •Embedded expedited pathway	• Increased uptake to bowel screening programme and consistent inclusion of FIT in diagnostic pathway • Consistent STT and One Stop Models with adequate diagnostic capacity • Sufficient diagnostic capacity and aligned with RDC development • Clearly defined pathways for non-cancer 2WW referrals
• Inconsistent provision and access to prehab across the ICS • Co-location of emergency and elective surgery reducing opportunities for enhanced recovery • Inequitable access and coordination of expertise across settings • Inconsistent access to MDTs across all pathways	Treatment & Condition Management	•Fully scope current prehab and SCOPES offer, agree risk stratification to support setting and mode of delivery and workforce requirements •Scope bed requirements to achieve separation •Map existing services to identify gap and scope requirements •Develop MDTs for non-cancer to mirror CRC, with PCN link	•Pilot prehab offer and further develop use of technology to support delivery •System agreement on future bed requirements •Implementation of increased capacity and development of guidelines/formulary to support delivery •Implementation of MDT and enhanced use of protocolisation	•Evaluate and roll out agreed prehab model to support consistent offer across cancer and non-cancer pathways •Ring-fenced beds considered within existing programmes of work to achieve separation e.g. Tomorrow's NUH •Equitable access to expertise •MDTs embedded with navigation between	• Consistent provision and access to prehab across the ICS • Separation of emergency and elective surgery increasing opportunities for enhanced recovery • Equitable access and coordination of expertise across settings • Consistent access to MDTs across all pathways
• Inconsistent implementation of evidence based guidelines across the ICS • Inequitable and inconsistent pathways across the ICS • Limited joint working opportunities • Lack of interfaces between systems to support decision-making • No robust plan for use of novel technologies	Whole System Approach	•Scope differences in service delivery to EBP and actions required •Determine pathway differences and develop plan for consistent approach •Utilise consistent approach to scope joint working opportunities •Define systems and connections required •Plans developed to invest in technology e.g. RPA software	•Develop consistent EBP guidelines and implement in practice •Use guidelines and identified differences to implement a consistent approach •Identify and agree joint working opportunities to be exploited •Interfaces implemented •Develop workforce education and skill development linked to use of novel technology	•Consistent EBP guidelines in practice and informing pathway delivery •Joint working embedded across the system to support coordination of care •Visibility of information across all settings to support decision making •Novel technologies consistently available to innovate service delivery	• Consistent implementation of evidence based guidelines across the ICS • Equitable and consistent pathways across the ICS • Joint working opportunities exploited • Robust interfaces between systems and optimised use of shared care systems to support • Increased use of novel technologies

10. Conclusions and Next Steps

Conclusions	The review of Colorectal services as part of the development of a Clinical and Community Services Strategy for Nottingham and Nottinghamshire ICS has been undertaken using a co-design model where patients, carers, key stakeholders and voluntary sector groups, have collaboratively worked together to shape a vision for the future care system. The work has progressed well working remotely and holding virtual meetings. The four key themes for improvement identified are: Prevention & Self-Care (with emphasis on education and awareness through a targeted education programme, helping to raise awareness of risk factors, symptoms and improve self-care, widespread adoption of identification and brief interventions, access to information and services to address risk factors); Detection & Diagnosis (enhancing uptake to the Bowel Screening Programme, consistent use of FIT and FC in diagnostic pathways, access to STT and one stop models, diagnostic capacity linked to RDC, pathway for non 2WW referrals following rule out of CRC); Treatment & Condition Management (with an emphasis on the development of a prehabilitation model for the ICS, configuration of inpatient beds to separate emergency and elective care, consistent and equitable access to expertise to support condition management – including continence and stoma services, local formulary and guidelines to support person-centred coordinated supply of appliances and medication, access to IBD helplines to support self-management); Whole System Approach (consistent model and approach to MDT across the system across cancer and non-cancer conditions, opportunities to enhance digital offer, develop well interfaced systems and incorporate the emerging use of technology to support a connected colorectal care system). The review describes a future care system in optimal care settings and with care provided at different levels of urgency and envisages 4 high priority programmes to transform care: **High** - Early detection and rapid access to diagnostics across the system to support early intervention **High** - Optimal surgical pathways to support enhanced recovery **High** - Consistent and equitable access to expertise to support condition management **High** - Enhanced digital offer and use of emerging technology To achieve these there are a range of enabling requirements for the ICS across workforce, technology, estate, culture and financial systems. Collectively these initiatives can help transform and provide long term health improvement and sustainability in the area of colorectal services in the Nottingham and Nottinghamshire ICS.
Next Steps	This strategy sets the future direction of development for colorectal care in the ICS and it is proposed it will shape future work of the ICS in a number of ways: • The identified priorities and programmes should be used to inform commissioning ICS, ICP and PCN activity • The enabling activities require development and inclusion in the relevant ICS workstreams to inform their work programmes • The impact on estate and configuration changes require inclusion in a programme of pre-consultation business case development alongside the service changes recommended from other reviews, although the impact for colorectal is less specific in relation to community hub space • The aggregate impact of the collective suite of service reviews should be used to shape focus of future service provision in acute and community settings in the ICS

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11. List of Abbreviations

2WW	Two Week Wait	LAS	Local Appliance Service
A&G	Advice and Guidance	LA	Local Authorities
ACP	Advanced Clinical Practitioner	LoS	Length of Stay
AHP	Allied Health Professional	LTC	Long Term Conditions
AI	Artificial Intelligence	LTP	Long Term Plan
App	Application	MDT	Multi-Disciplinary Team
BAME	Black, Asian and Minority Ethnic	MECC	Make Every Contact Count
BMI	Body Mass Index	MH	Mental Healthcare
CCSS	Clinical and Community Services Strategy	Mid Notts.	Mansfield & Ashfield, Newark & Sherwood
CCG	Clinical Commissioning Group	MRI	Magnetic Resonance Imaging
CNS	Clinical Nurse Specialist	NDDI	Nottingham Digestive Diseases Interface
CRC	Colorectal Cancer	NHFT	Nottinghamshire Healthcare Foundation Trust
CT	Computed Tomography	NHS	National Health Service
DoS	Directory of Service	NHSE/I	National Health Service England and Improvement
EBP	Evidence Based Practice	NICE	National Institute for Health and Care Excellence
ED	Emergency Department	NUH	Nottingham University Hospitals
EMAS	East Midlands Ambulance Service	OOH	Out of Hours
EMRAD	East Midlands imaging Network	OP	Outpatient
ERS	E-Referral Service	PC	Primary Care
F12	GP referral guidance system	PCN	Primary Care Network
F2F	Face to Face	PHE	Public Health England
FC	Faecal Calprotectin	PHM	Population Health Management
FIT	Faecal Immunochemical Test	PID	Project Initiation Document
FU	Follow up	PKB	Patient Knows Best
GBD	Global Burden Disease	PN	Practice Nurse
GIRFT	Getting It Right First Time	QoL	Quality of Life
GP	General Practitioner	QIPP	Quality, Innovation, Productivity and Prevention
H&SC	Health and Social Care	QALY	Quality Adjusted Life Year
HCP	Healthcare Professional	RDC	Rapid Diagnostic Centres
IAPT	Improving Access to Psychological Therapies	RPA	Robotic Processing Automation
IBA	Identification and Brief Advice	ROI	Return on Investment
IBD	Inflammatory Bowel Disease	SC	Social Care
ICD10	International Classification of Diseases	SCOPES	Systematic Care of Older People in Elective Surgery
ICP	Integrated Care Partnership	SFH	Sherwood Forest Hospitals
ICS	Integrated Care System	STT	Straight to Test
IP	Inpatient	UK	United Kingdom
IT	Information Technology		

12. Data Sources

Data Sources	Bowel Cancer UK Bowel Interest Group British Medical Journal Local Data from NUH, SFH, Social Care, CCGs, GPRCC, eHealthscope East Midlands Cancer Alliance Enhanced Recovery After Surgery European Society for Parenteral and Enteral Nutrition Getting It Right First Time National Institute for Health and Care Excellence Macmillan NHS England NHS Long Term Plan Nottingham Appliance Management Service