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NHS
North East and North Cumbria

REPORT CLASSIFICATION	✓	CATEGORY OF PAPER	✓
Official	X	Proposes specific action	
Official: Sensitive Commercial		Provides assurance	
Official: Sensitive Personal		For information only	X

BOARD 28 March 2023	
Report Title:	The use and development of information systems for the work of the Integrated Care Board (ICB) – Follow up report.

Purpose of report

The purpose of this paper is to provide a further update in relation to the NHS North East and North Cumbria (NENC) ICB Board of Directors meeting of 31 January 2023.

Key points

- The paper presents a further update to the series of questions being used to determine the current data provision capabilities. Appendix 1 - includes the most recent data sets and associated infographics. This paper compliments the previous report and associated presentation by the ICB Executive Chief Digital and Information Officer.
- At the point of reporting, there are still some data and reporting gaps, as data elements are not yet available or able to be collected.

Risks and issues

- There is an increasing dependency on data and analytics services to support the ICB's strategic and operational needs, as well as broader insight to inform and transform population health and associated care services.
- The ICB's data, analytics, and insight strategic approach, requires all parts of the integrated care system to provide, high quality timely and accurate data.
- Subject matter/domain experts will need to work in partnership with data and analytics experts to contextualize data and develop appropriate actionable insights.
- Not all data items are currently available to respond to all questions fully.

Assurances

- The ICB's data and analytics service development has the full commitment and support of the ICB board and Executive team and is recognised as a critical service.

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Recommendation/action required
The challenge questions set have illustrated the availability and interpretation of data is broadly available within the digital and data services supporting the Integrated Care Board and wider Integrated Care System. From the source data available within this revised report, there is a general conclusion that it is broadly: a) relevant, meaningful, accurate and up to date. b) capable of enabling valid judgements based on comparisons of service performance over time and between similar services delivered in different localities; c) accepted and valued by clinicians and other staff; d) can and will be used and relied on by system and organisational leaders and managers; e) trusted by patients, service users and the public. There are some remaining data gaps exist these will continue to be addressed in order fully complete the challenge requirements.

Acronyms and abbreviations explained	
All acronyms/abbreviations used have been explained within the body of the report.	
Sponsor/approving director	Professor Sir Liam Donaldson
Report author	John Fitzsimmons/Professor Graham Evans

Link to ICB corporate aims (please tick all that apply)	
CA1: Improve outcomes in population health and healthcare	**X**
CA2: tackle inequalities in outcomes, experience and access	**X**
CA3: Enhance productivity and value for money	**X**
CA4: Help the NHS support broader social and economic development	**X**

Relevant legal/statutory issues						
N/A						
Any potential/actual conflicts of interest associated with the paper? (please tick)	**Yes**		**No**	**X**	**N/A**	
If yes, please specify						
Equality analysis completed (please tick)	**Yes**		**No**		**N/A**	**X**

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If there is an expected impact on patient outcomes and/or experience, has a quality impact assessment been undertaken? (please tick)	**Yes**		**No**		**N/A**	**X**
Key implications						
Are additional resources required?	No					
Has there been/does there need to be appropriate clinical involvement?	N/A					
Has there been/does there need to be any patient and public involvement?	N/A					
Has there been/does there need to be partner and/or other stakeholder engagement?	No					

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CHAIRMAN'S CHALLENGE: WHAT IS THE CAPABILITY OF CURRENT INFORMATION SYSTEMS TO ANSWER KEY PERFORMANCE QUESTIONS ABOUT THE INTEGRATED CARE SYSTEM?

Purpose

The purpose of this paper is to provide a further update in relation to the NHS North East and North Cumbria (NENC) ICB Board of Directors meeting of 31 January 2023 and further contribute to the Board level exploration of the capability of existing sources information underpinning the delivery of these responsibilities and generate a common understanding across the Integrated Care System (ICS).

This report provides a progress update of the data readily available as well as illustrating the remaining data gaps – the report compliments the data provided in Appendix 1.

Illustrative questions

The following section of the report builds on the original report and now includes responses by each of the 10 challenge questions.

As a reminder, the questions were not intended to systematically and comprehensively cover the ICB's work. Nor is the list of data 'requests' intended to be exhaustive, simply to enable a free-ranging discussion amongst board members.

1. ***Are people with diabetes receiving a standard of care that gives the lowest possible level of avoidable complications of their disease?***

Rationale*: Diabetes is a common non-communicable disease that affects large numbers of people. If it is well-managed, known adverse outcomes can be eliminated or their onset delayed. These include premature death or disability (e.g. from heart disease or stroke), blindness, skin ulceration (sometimes leading to limb amputation), kidney disease, nerve damage, obesity (with its attendant risks).*

Availability of information*: What information is routinely available to describe where people with diabetes are living within the ICS area? How well is diabetes being controlled amongst residents in different ICS Places? What level of known complications is occurring amongst residents in different ICS Places?*

Response

213,000 patients are registered as diabetic in the NENC region as at January 2023 (6.7% of all patients), prevalence strongly linked to age and sex as well as deprivation.

More than 3,200 admissions for diabetes (primary diagnosis) October 2021 – September 2022, including 950 for diabetic complications.

There are strong links to deprivation and co-morbidities (particularly learning disabilities and mental health disorders).

28% of adult diabetic patients have had all 9 care processes recorded in past year (57% at least 8). This is lower in more deprived areas. 17% of adult diabetic patients have 5 or fewer of the key care processes recorded – higher in more deprived areas.

The most commonly 'missed' care processes are recording foot checks, retinal screening and albumin levels. Recorded albumin levels very low in Tees and Sunderland, and recorded foot checks very low in Tees, Sunderland, and South Tyneside - but this may be due to recording.

Glycaemic control worse, on average, in more deprived areas.

Patients with learning disabilities and mental health disorders, compared with NENC's general diabetic population consistently have:

- Lower uptake of Key Care Processes
- Poorer glycaemic control
- Higher rates of hospital admission for diabetes and its complications

2. ***How early is bowel cancer being detected and treated?***

Rationale*: Colo-rectal cancer is the fourth commonest cancer in the UK and the second biggest killer. Of those diagnosed in the earliest cancer stage, 90% survive for five years or more whilst for those cancers recognised at the latest stage, survival is 10%.*

Availability of information*: What is the incidence of colo-rectal cancer amongst residents in each ICS place? What is its incidence in the under-50 age groups? What is the distribution of stages of cancer at diagnosis amongst residents in each ICS Place? What are the rates of five- and 10-year survival for different stages of cancer at diagnosis amongst residents of different ICS Places? What are the rates of five- and 10-year survival for different stages of cancer at diagnosis according to which hospital the patients were treated at?*

Response

In 2020, NENC has a higher incidence rate of colorectal cancer (68.8 per 100,000) than the national rate (63.3 per 100,000). All areas within NENC are above the national incidence rate for colorectal cancer. The rate varies from Sunderland at the highest with a rate of 77.4 and County Durham at the lowest of 63.4.

When looking at incidence of colorectal cancer in under 50s, the NENC rate (6.2) per 100,000 population continued to be higher than the national average (5.9). South Tyneside had the highest proportion of colorectal cancers being diagnosed at stage 1 within the NENC region.

NENC is below the national average survival rate for colorectal cancer when comparing across 1, 5 and 10 years. In the NENC region, the 1-year survival rate ranges from 81.3% in Newcastle Gateshead to 79.0% in County Durham

3. ***What is the health and health care experience of the most deprived areas?***

***Rationale**: The population served by the ICS contains some of the highest levels of economic and social deprivation in the country. These conditions are powerful determinants of poor health and well-being and have proved to be intractable over time.*

***Availability of information**: Taking the smallest population areas as the unit of analysis, which are the 50 such areas in the ICS that score worst on deprivation indices? Using five markers (expectation of life at birth, expectation of life at 65 years, death from cardiovascular disease, infant mortality, suicide rate) compare the 50 small areas collectively with all other areas combined.*

Response
Middle Layer Super Output Areas (MSOA's) are used as the area for small populations. There are 380 MSOAs in NENC meaning that the top 50 most deprived are the top 13% deprived of areas. Middlesbrough has the highest number of the top 50 deprived MSOAs (8), including the most deprived: North Ormesby & Brambles farm.

Hartlepool has the highest proportion of it's MSOAs in the top 50 with 6 out of 12 (50%) ranked.

Deprived areas have a lower life expectancy at birth (F 78.4 / M 73.4) than other MSOAs (F 82.4 / M 78.6). The other 330 MSOAs still have a lower life expectancy than England overall (F 83.2 / M 79.5)

Death from cardiovascular disease is shown in a standardised mortality rate with England being 100.0, the top 50 most deprived areas have an average of 147.2, while other areas still have a higher value than national (106.2).

Data on expectation of life at 65 years, infant mortality, and suicide rate are not available at small population areas.

4. ***How good is population uptake and coverage for preventive health interventions?***

***Rationale**: A number of preventive health services organised NHS-wide reduce disease incidence and mortality, but their effectiveness depends on achieving high uptake.*

***Availability of information:** For the following four preventive services- bowel cancer screening, breast cancer screening, childhood immunisation, proportion of over-65s with high blood pressure being successfully controlled- what is the percentage coverage of the eligible population in each of the ICS areas? For the same four measures in small areas, across the whole ICS, what are the five best and five worst performers?*

Response
In 2021-22, the North East and Cumbria local authorities perform better than the national average for vaccine uptake in children in most cases, with the below exceptions:
Middlesbrough LA is below national average for uptake on every vaccination statistic, for 1, 2- and 5-year-olds.
Newcastle upon Tyne LA are lower than national average for DTaP-IPV-Hib-HepB (2 year olds), MenB (1 & 2 year olds) and Hib/MenC (5 year olds).

The North East region is the highest performing region in England across all vaccine uptake metrics, with South Tyneside, Sunderland and County Durham LAs being the highest of all local authorities in the country for vaccine uptake in 1- and 2-year-olds.

The prevalence of controlled hypertension in NENC is significantly higher than the latest published national figure for those aged 65-74 (North East 27.5%, England 24.5%) and 75+ (North East 39.1%, England 29.8%).

The highest prevalence within NENC is in County Durham and Newcastle upon Tyne LA's, which are 12% and 9% higher than the national figure for those aged 75+.

Prevalence is higher in males generally, however in those aged 75+, the difference in prevalence in the North East compared to England is higher in females (+9.8%).

The bowel cancer screening up take was higher in NENC (72.7%) than the national average (70.3%). The uptake rate in NENC ranged from 77.3% in Northumberland to 66.3% in Middlesbrough. All but two areas within NENC had a rate higher than the national uptake.

The breast cancer screening up take was higher in NENC (67.8%) than the national average (64.9%). The uptake rate in NENC ranged from 73.3% in North Cumbria to 56.8% in North Tyneside. All but three areas within NENC had a rate higher than the national uptake.

5. ***What is known about levels of incapacity and frailty of older people living at home?***

Rationale*: Three-quarters of people aged 75 years and older have more than one long-term condition. People of this age and older living at home are at greatly increased risk of attending an accident and emergency department, being acutely admitted to hospital or needing to be in a residential care facility.*

These risks are dependent on the nature of their illness, but also the extent of their physical and mental capacity and the presence of frailty.

Availability of information: *What are the numbers of men and women aged over 65 years with moderate and severe levels of frailty living within the ICS area? What age groups are they in? How many live alone? What are the same data for each of the ICS Places?*

Response
The identification of frailty is key to support people pro-actively and reduce the risk of avoidable healthcare events such as unplanned hospital admissions.

Ageing Well workstreams are working with clinical leads and NECS analysts to develop new tools that reflect the wide range of risks that can cause frailty. This new approach is being rolled out across the NENC Primary Care Community through engagement and shared learning.

6. ***What is the level and causal nature of avoidable harm generated by care providers and in care settings?***

***Rationale**: Studies of patient safety and review of data arising from incident reporting systems carried out nationally and internationally have shown that the level of avoidable harm associated with care is higher than it is generally perceived to be. Action to reduce it and sustain improvement have been of limited success.*

***Availability of information:** What numbers of serious patient safety incidents have occurred in the past five years (2018-2022) in each of the providers of care within the ICB's jurisdiction? What types of incidents were they? Acknowledging that there will be overlap between serious incident and Never Events, what numbers and types of Never Events have occurred in each of the providers of care within the last five years?*

Response

In the past 5 years (2018 to 2022), there have been some 4,655 serious incidents together with 140 never events recorded and reported regionally. Never Events (NE's) are patient safety incidents that are wholly preventable where guidance or safety recommendations that provide strong systemic protective barriers are available at a national level and have been implemented by healthcare providers.

Main causes of recorded incidents for Mental Health related services include, Apparent/ Actual/Suspected Self Harm being the most common recorded in the last 5 years (2018-2022). Acute secondary care providers are the biggest contributors to the rest of the top 10 most common incident types including Slips/Trips/Falls through to Medication Incidents.

The reported NE's are predominantly related to Surgical invasive procedures, followed by medication incidents, other reported problems relate mainly to screening and medical equipment events.

7. ***What are the risks to patients of acquiring an infection during their care?***

Rationale: In hospitals providing acute care in high-income countries like the United Kingdom, the World Health Organisation has estimated that, out of every 100 patients, seven will acquire at least one health care-associated infection during their hospital stay. The COVID-19 pandemic has clearly shown how central infection prevention and control is to maintain vital services and ensuring patient and staff safety.

Health care-associated infections and the spread of antimicrobial resistance in health care settings are a consequence of poorly organised and delivered infection prevention and control programmes.

Key failures include low compliance with hand hygiene and aseptic practices, contaminated medical equipment and supplies, inadequate environmental cleaning, insufficient training in infection prevention and control policies and practices, very high bed occupancy, understaffing and suboptimal infrastructure for patient isolation, weak leadership and adverse cultures.

Availability of information: For each provider of acute care show the number of healthcare-associated infection in the following categories: i) surgical site infections ii) catheter associated urinary tract infections iii) central line associated blood stream infections iv) Methicillin-resistant staphylococcus aureus (MRSA) bacteremia v) Clostridium difficile for

each year 2017-2022. For each provider of acute care show the number of cases of COVID-19 acquired in hospital by patients and staff for the years 2020-2022. For each provider of acute care show the rate of hand hygiene compliance in clinical areas in the most recent available time period.

Response
The key risks in relation to healthcare associated infections during a period of patient care across the NENC 8 acute providers comprise;

- **41** surgical site infections (2021-22).
- **32** MSRA Bacteraemia's (2022).
- **986** C.Diff infections (2022).
- Between 2020 – 2022 some **52,000** in patients were diagnosed with COVID-19.

8. ***What do patients think of the care that they receive and what information about services is available to them?***

Rationale: *Looked at from first principles the kind of questions a user or potential user of a service might ask about their care could include: How quickly will I be first seen; how quickly will I get a diagnosis and how quickly will I receive definitive treatment? If my condition is potentially life-threatening, will the local service give me the best odds of survival, or could I do better elsewhere?*

Will the staff treating me be competent and up to date in their practice? Does the service have a low level of complications for treatment like mine compared to other services? Does the service have good quality assurance and quality improvement systems in place? What is the safety record of the service concerned?

How good are the amenities and environment of the hospital or health centre where I will be treated?

Is the medical equipment for diagnosing and treating patients like me, state of the art? Have patients treated by this service in the recent past rated it highly on dignity, respect, information-giving? How does the service compare to others around the country and elsewhere in the world? Many of these practical and common-sense questions that patients and families might have are not readily available to them.

Availability of information: *What information is produced by each provider of care within the ICS about patients' views and experience of care? What range of information about quality of services (particularly comparative and benchmarking data) is available for patients and families? How extensively are Patient Reported Outcome Measures (PROMS) used by providers of care and what are the main findings of analysis of these data?*

Response
Based on January 2023 data through Friends and Family Test (FFT) collection processes, there is a very positive feedback across all care settings regionally, with only A&E and Patient Transport services receiving a small percentage (5% - 8%) of negative feedback.

Currently the FFT data does not provide results that can be used to directly compare providers because of the flexibility of the data collection methods and the variation in local populations. - This means it is not possible to compare like with like.

Patient Reported Outcome Measures (PROMS) are used extensively across the region, using standardised questionnaires to measure quality of life before and after a health intervention. Where data routinely published, i.e. for two procedures, elective knee and hip replacements, three NENC providers show significantly better outcomes than the England average for knee replacements.

9. ***Children and young people's mental health***

Rationale: *In 2022, in England, 18% of children aged 7 to 16 years and 22% of young people aged 17 to 24 years had a probable mental disorder*. *In children aged 7 to 16 years, rates rose from 1 in 9 (12.1%) in 2017 to 1 in 6 (16.7%) in 2020. Rates of probable mental disorder then remained stable between 2020, 2021 and 2022. In young people aged 17 to 19 years, rates of a probable mental disorder rose from 1 in 10 (10.1%) in 2017 to 1 in 6 (17.7%) in 2020. Rates were stable between 2020 and 2021, but then increased from 1 in 6 (17.4%) in 2021 to 1 in 4 (25.7%) in 2022. The numbers of suicides amongst the 15–19-year-olds in England rose by 35% between 2020 and 2021 and is the highest for 30 years.*

Availability of information: *How many referrals to children and adolescent mental health services were made from each of the ICS's Places each year from 2018 to 2022? Which are the small areas with the highest number of such referrals? How many suicides were there amongst young people aged 15 to 19 years for each of the years 2018 to 2022 and where did they live?*

Response

A recovery action plan is in place to deliver services by 2023/24 for increased number of children and young people receiving at least one mental health contact. All waiting times are beginning to be monitored. Neurodevelopmental conditions and eating disorders are challenging. There are some concerns in relation to difficulties in recruiting and retain appropriate staff.

10. ***What progress is being made in controlling tobacco-related disease?***

Rationale: *Smoking remains the leading cause of preventable death in the ICS region. Although smoking rates are still higher than the national average, the region has achieved the largest reduction in smoking prevalence in the country (15.3% in 2019 vs 29% in 2005). Tobacco is a major causal contributor to health inequalities.*

Availability of information: *What is the prevalence of smoking in each of the ICS Places? Which are the small areas that collectively contain 80% of the ICS's current smokers? Which are the ten small areas with the highest smoking prevalence?*

How many people attending smoking cessation services in each of the ICS Places in the years 2018-2022? What were the quit rates achieved by each of these services in the same time periods?

Response

In 2021, 14.8% of the 16+ population in the region were identified as smokers, this compares with 21.3% in 2011. Highest prevalence is Middlesbrough (17.9%) and the lowest is Darlington (10.6%). The region has a smoking reduction target of 5.0% by 2030. There are several smoking cessation initiatives regionally, as of March 2022, there were 3,794/100k adults (16+) setting a quit date, this compares to 6,256/10k in March 2018.

Most “places have smoking cessation initiatives in operation, except Hartlepool, who have not had a service sine 2018-19. North Cumbria, service users have been declining since the Covid-19 pandemic, a reinvestment plan is scheduled for Q4 2022-23. Self-reporting successful quitters are being validated/confirmed using Carbon Monoxide meter readings.

Conclusions

As previously reported, information on the performance of services is needed for at least four main purposes: accountability, quality improvement, choice, and management.

From the source data available, within this revised report, there is a general conclusion that it is broadly :

e) relevant, meaningful, accurate and up-to-date.
f) capable of enabling valid judgements based on comparisons of service performance over time and between similar services delivered in different localities;
g) accepted and valued by clinicians and other staff;
h) can and will be used and relied on by system and organisational leaders and managers; e) trusted by patients, service users and the public.

There are some remaining data gaps that continue to be addressed in order fully complete the challenge requirements.

Professor Graham Evans
22 March 2023