

**9 June 2021****Agenda Item: 10****REPORT OF THE NOTTINGHAM AND NOTTINGHAMSHIRE INTEGRATED  
CARE SYSTEM****POPULATION HEALTH MANAGEMENT: AN UPDATE ON HOW THE LOCAL  
RESILIENCE FORUM'S DATA AND INFORMATION CELL HAVE  
SUPPORTED THE SYSTEM THROUGHOUT COVID-19.****Purpose of the Report**

1. The report summarises how the Nottingham and Nottinghamshire Population Health Management (PHM) approach has been adopted system wide to support its population during the pandemic, addressing the direct and indirect effects of COVID-19 and identified health inequalities as part of the response.

**Information**

2. The Population Health approach aims to improve physical and mental health outcomes, promote wellbeing, and reduce health inequalities across the Nottingham and Nottinghamshire population.
3. This includes focusing on the wider determinants of health and includes segmentation, risk stratification and impact ability modelling to identify local 'at risk' cohorts. It is designed to target impactable interventions to prevent ill-health and to improve care and support for people with on-going health conditions and reducing unwarranted variations in health outcomes.
4. Population Health Management (PHM) is a partnership approach across the NHS and other public services including councils, the public, schools, fire service, voluntary sector, housing associations, social services and police. All have a role to play in addressing the interdependent issues that affect people's health and wellbeing. The Health and Wellbeing Board received a presentation introducing the Nottingham & Nottinghamshire Integrated Care System's approach to population health management at its Board meeting in March 2020. A presentation summarising this approach and progress to date will be provided at the Board's meeting in June.
5. The approach uses a range of data resources (historical and current data) to understand what factors are driving poor outcomes in different population groups. This is then used to design new proactive models of health/care which will improve health and wellbeing in the short medium and longer term.
6. One of the key achievements and core enabler for PHM has been the use of eHealthscope. eHealthscope is a shared intranet system that facilitates data intelligence extracted from a

data warehouse, a GP repository for clinical care (GPRCC). GPRCC holds 1.7 billion records, of which millions of records are updated daily. 100% of GPs in Nottinghamshire are signed up to the data sharing protocols and it can provide not only integrated records, but also pseudonymised data for direct patient care.

7. The eHealthscope system is one of its kind in the UK, and although with limited resources it continues to be the central repository for building, integrating system partner's data and understanding the future potential data/digital intelligence requirements needed to deliver PHM at a population level.
8. In early January 2020, the PHM team was approached and merged into the Data and Information Cell as part of the Nottingham Nottinghamshire's system wide emergency response to COVID – 19. This Cell integrated health and care analysts from across all areas of the system including representation from the Nottingham/Nottinghamshire Integrated Care System (ICS), Public Health, Sherwood Forest Hospital Trust, Nottingham University Hospital Trust, Nottinghamshire Healthcare Trust Nottingham County Council and Nottingham City Council.
9. By collaborating these key analytical partners, the Data and Information Cell has been able to overcome traditional data sharing barriers to understand the local impact of COVID -19 and offer reliable, actionable data intelligence to the system and inform the response to COVID-19.

## High Level Briefings

10. The Data and Information Cell has produced high level briefings weekly and more frequently, when necessary, to support the system in understanding COVID and the impact of COVID – 19 across Nottinghamshire. It has been the main source of information for Executive Officers and utilised by system partners to inform local decision making and planning purposes. The report is based on locally held data intelligence and covered the following key areas:
 

<ul style="list-style-type: none"> <li>• Deaths, Excess Deaths</li> <li>• Local COVID-19 Surveillance System</li> <li>• Apple and Google Mobility Reports</li> <li>• Laboratory Confirmed Cases (PHE Data)</li> <li>• Bed model output</li> <li>• NHS 111 Data</li> <li>• East Midlands Ambulance Service (EMAS) 999 Calls</li> <li>• Weekly A&amp;E Data (Emergency Care Dataset: ECDS)</li> <li>• Positive cases in the last 7 Days</li> <li>• Positive Cases by Lower-Tier Local Authority in Nottinghamshire</li> <li>• PPE allocation</li> </ul>	<ul style="list-style-type: none"> <li>• Hospital Deaths</li> <li>• Trends in Positive Cases in Nottingham and Nottinghamshire (Pillars 1 and 2)</li> <li>• Pillar 1 and 2 cases by Age Group and Pillar</li> <li>• Positivity Rate in Nottingham and Nottinghamshire</li> <li>• Estimated R number in Nottingham and Nottinghamshire</li> <li>• New COVID-19 Hospital Admissions/Inpatients at NUH, SFH and BH</li> <li>• ITU/HDU Beds Occupied by COVID-19 confirmed Patients</li> <li>• COVID-19 Hospital Deaths at NUH, SFH and DBH</li> <li>• Nottinghamshire Healthcare NHS Trust Beds Occupied by COVID-19 confirmed Patients</li> <li>• Registered Deaths in Nottingham and Nottinghamshire</li> </ul>
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## **Mental Wellness Rapid Review**

11. As the pandemic progressed, the Data and Information Cell were approached to produce a 'Rapid Response to Mental Wellness'. The initial response to COVID-19, was that of a health crisis, but it was becoming more apparent that this pandemic could lead to a significant mental health crisis. Mental health is the second highest cause of disability and illness. Globally and in Nottinghamshire, 14% or 1 in 7 of quality life years lost to disability or illness can be attributed to mental illness.
12. In Nottinghamshire there is already a significant prevalence of mental health conditions and this is aligned to areas of deprivation. Since the COVID-19 pandemic and the associated measures that have been introduced, for example social distancing and lockdowns, the longer-term socioeconomic impacts are highly likely to intensify the inequalities that contribute towards the increased prevalence and unequal distribution of mental ill-health across the system.
13. Therefore the Data and Information Cell extended its partnership working across the system utilising expertise from external organisations such as Nottingham Trent University, Experian and Imperial College London to produce this rapid assessment focusing on what can be done quickly to support those with a mental health condition to cope during and after COVID-19.
14. The assessment identified seven areas that could prevent escalation of a mental health episode. The aim being to collectively use resources, skills and expertise to support Nottinghamshire's population through the pandemic, looking at impactable interventions to support:
  - Shielded/isolated or vulnerable population
  - Unemployed or those experiencing financial difficulties
  - Families and their infrastructure
  - People who have suffered a bereavement
  - BAME Groups
  - People with multiple long term conditions
  - The workforce in Nottinghamshire
15. This review and its recommendations are being used to inform the Health and Wellbeing Board workshop on mental health in July 2021.

## **Flu Vaccination Program**

16. As the second wave of COVID – 19 became more apparent, the team continued to support the system with winter pressure planning, such as modelling capacity and demand. In addition to this, the team used locally held data intelligence to help identify and plan the flu vaccination program. Historically flu vaccination programmes have been shown to improve outcomes in 'at-risk' groups, and in doing so reduces health inequalities, with the benefits of immunization openly shared year on year. Coverage and uptake varies widely across the Nottinghamshire population.
17. Utilising integrated data and intelligence the analytical team were able to identify and reduce variation in those profile groups by: -

- a. Identifying at risk (eligible) population cohorts
  - b. Baseline previous years uptake
  - c. Recommend interventions to improve uptake
  - d. Profile population profiles at Place and System
18. By applying the local Population Health Management approach, the system adopted a more targeted approach based on insightful data combined with focussed delivery, which has empowered the system to deliver a challenging target and protect at least 75% of the at risk population in Nottinghamshire.

### **Emergent Alliance**

19. Throughout the pandemic the Data and Information Cell used a variety of resources to help inform the decision making across the system. Working with the Emergent Alliance, a not-for-profit partnership, had the ability to take a broad set of economic, behavioural and sentiment data that share invaluable insights back to the system.
20. A video of the work completed with the Alliance can be found on the following link:  
<https://www.connectednottinghamshire.nhs.uk/population-health-management/phm-videos>

### **COVID-19 Vaccination Program**

21. The data and information Cell has spent much of 2021 supporting the COVID - 19 Vaccination Cell Program.
22. A Joint Strategic Needs Assessments (JSNAs, 2020) for both Nottinghamshire County and Nottingham City highlights an increasing number of adults who have a diverse need and may require considerable input from health and social care services. This includes mental health, long term conditions, vulnerable, housing, physical and/or sensory impairment and learning disabilities. Amongst Nottinghamshire's diverse local communities' data intelligence has identified that there are areas of inequalities:
- a. Increasing numbers of older people living alone, including those without a car in more rural areas of the county.
  - b. Disability affects a large proportion of the population - Approximately one in ten adults in Nottinghamshire aged 18-64 live with moderate/severe physical disabilities and approximately one in five people aged 65+.
  - c. Within Nottinghamshire and Nottingham there are communities with some of the highest levels of deprivation in the country and some of the lowest levels of deprivation.
23. The Data and Information Cell have reconciled, local insights in addition to the JCVI guidance and Equalities Act requirements and have identified groups for whom additional focus must be given in order to prevent inequalities in access to the vaccination within their priority cohort. These groups have been identified as:
- Over 80s
  - Carers
  - Deprived communities
  - Clinically extremely vulnerable people (CEVPs)

- People from black and minority ethnic communities (BAME)
  - People who are homeless
  - People with severe and multiple disadvantage (SMD)
  - Those living in rural and isolated areas
  - Those who are not digitally literate
  - People with learning difficulties and disabilities
  - People with physical and mental health disabilities and mobility issues
24. The ability to use population modelling to stratify and plan for the needs of different population groups through GPRCC (General Practice Repository for Clinical Care) and e- Healthscope has provide daily vaccination data updates to the system. Interventions have been tailored and targeted to specific cohorts and groups in Nottinghamshire.
25. At the time of compiling this report the Data and Information Cell were producing numerous dashboards to support the COVID – 19 vaccine program, along with providing ad-hoc localised reports. In addition to this, a weekly report is also produced (at present for Cohort 6 and CEV uptake) and will extend across all JVCI cohorts as and when released.
26. **Appendix 1** provides samples of the data supplied to support the vaccine delivery, uptake and targeting of the population.

## Ageing Well

27. The PHM Program of work has been continuing throughout COVID – 19 with a full PHM Blueprint Pack on Ageing Well due to be launched in early June 2021.
28. Utilising the PHM approach to ageing well required ambition and collaboration across the system with health, social care, voluntary and third sector organisations being integral to its success. The program has a system wide, outcomes focus; driven by data intelligence, need and not by existing services. It considers the whole life course and addresses the wider determinants of health to early intervention, primary, secondary and tertiary disease prevention, and aims to understand and address any health/care inequalities, including wider determinants to have a positive impact on health outcomes overall.
29. The PHM analytical team have utilised numerous data sources; health/care and wider determinant data to understand the ageing well population's health and care needs. The aim is to identify variants, addresses any health inequalities and produce ageing well local population profiles. It offers evidence based impactable intervention recommendations to assist the system in fulfilling both local and national priorities and to achieve further improved outcomes for the ageing population in Nottinghamshire.
30. The pack will offer an executive summary of the key high level data and intelligence findings, multivariate regression analysis, combined with a high level overview of some of the headline areas where impactable interventions can be applied to achieve the outcomes for this population.
31. The Blueprint Ageing Well Pack will be available to download on the Connected Nott's website (<https://www.connectednottinghamshire.nhs.uk/>).

## **Next Steps to address Health Inequalities**

32. The Data and Information Cell continues to support the Nottingham/Nottinghamshire ICS with analytical support for data intelligence, logistic regression modelling that follows the PHM program, but also allows 'ad-hoc' requests to be made, reviewed and prioritised in response to system requirements. The next program of work for PHM remains very much focused on Mental Wellness and Long Term Conditions and will include and address any health/care and wider determinant inequalities as part of this work.
33. Recruitment of a senior Health Inequality Analyst is currently underway and expected to be in position over the next couple of months, it is intended that this post will support the current team and system on all aspect of health inequalities and offer evidence based impactable interventions to reduce any identified inequity across out population.
34. To support the Integrated Care Partnerships Primary Care Networks, the ICS is advertising for a PHM Training Co-ordinator. It is intended that this position will offer training to support clinical/non clinical staff to utilise the data intelligence within e-Healthscopes profiling tools to better understand the populations we serve, and to improve physical and mental health outcomes, promote wellbeing and reduce health inequalities across the entire Nottingham and Nottinghamshire population.
35. The team are and will continue to work closely across the system, aligned with the newly agreed Health Inequalities Strategy. As part of the recommendations of this report and commitment to address health inequalities in Nottinghamshire, the Population Health Management team can contribute to future discussions at the Health and Wellbeing Board on how the PHM approach can be used to support this ambition.

## **Other Options Considered**

36. None

## **Reason/s for Recommendation/s**

37. The recommendation aims to support continued co-ordination between the Nottingham & Nottinghamshire Integrated Care System and the Health & Wellbeing Board on the approach to population health management.

## **Statutory and Policy Implications**

38. This report has been compiled after consideration of implications in respect of crime and disorder, data protection and information governance finance, human resources, human rights, the NHS Constitution (public health services), the public sector equality duty, safeguarding of children and adults at risk, service users, smarter working, sustainability and the environment and where such implications are material they are described below. Appropriate consultation has been undertaken and advice sought on these issues as required.

## **Financial Implications**

39. There are no financial implications arising from the contents of this report.

## **RECOMMENDATION(S)**

The Health and Wellbeing Board is asked-

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**NHS Nottingham & Nottinghamshire Integrated Care System**

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### **Constitutional Comments (CEH 19/05/2021)**

40. The recommendation falls within the remit of the Health and Wellbeing Board under its terms of reference.

### **Financial Comments (DG 17/05/2021)**

41. There are no direct financial implications arising from this report.

### **Background Papers and Published Documents**

Except for previously published documents, which will be available elsewhere, the documents listed here will be available for inspection in accordance with Section 100D of the Local Government Act 1972.

- None

### **Electoral Division(s) and Member(s) Affected**

- All