Baseline Characteristics Among 101 407 People with Myocardial Infarction Over Nine-Year Time Period: A Population-Based Study Using Primary Care Data

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Background: Cardiovascular (CV) disease (CVD) accounts for 25% of all UK deaths. Before developing and applying new or existing CV risk prediction tools for prediction of incident CVD events, it is important to have a description of the baseline characteristics of the patients who experienced a myocardial infarction (MI) event.

Methods: We used the Aurum database from the Clinical Practice Research Datalink (CPRD), which includes patients from primary care, linked with practice level Index of Multiple Deprivation (IMD) data to identify patients diagnosed with MI between January 2006 and December 2014 in England, UK aged ≥35 years. We report the baseline characteristics of this population: biological parameters, comorbidities and medications, at the time of the first MI event which took place within the considered time window. We also report age, sex, follow-up time (i.e. duration from first MI until censoring defined as the earliest date of end of study 2014, date of death, transferred out date and last collection date), time to death after first MI and deprivation information.

Results: A total of 101407 patients met the inclusion criteria: 63939 people were males (63%), age (mean ± standard deviation) at diagnosis was lower for male patients (66.81 ± 13.19) compared to females (74.83 ± 13.01). There were 24256 deaths after first MI event, or 23.91% of the cohort. The MI follow-up in years (mean ± standard deviation) was 3.24 ± 2.52 years. In particular, time to death after first MI was longer for males (3.83 ± 3.29) than for females (3.39 ±3.09). Patients were homogeneously distributed in terms of social deprivation (IMD quintiles): 20% quintile 1-least deprived, 20.4% quintile 2, 19.9% quintile 3, 19.6% quintile 4, 19.8% quintile 5-most deprived. In terms of Body Mass Index (BMI), 1.5% were underweight, 21% normal weight, 28.5% overweight, 21% obese and 26% had a missing value. The biological parameters consisted of: Diastolic Blood Pressure (mean ± standard deviation) which was 77.29 ± 11.37 mm Hg, Systolic Blood Pressure was 136.63 ± 18.87 mm Hg, Plasma cholesterol was 5.01 ± 1.28 mmol/L, Plasma triglyceride was 1.71 ±1.16 mmol/L and High Density Lipoprotein (HDL)-cholesterol was 1.33 ± 0.41 mmol/L. For comorbidities: 10.62% of the cohort had a record of stroke and transient ischemic attack, 6.91% heart failure, 41.33% hypertension, 19.27% chronic kidney disease, 31.87% coronary heart disease, 19.20% diabetes, 20.68% hyperlipidemia, 36.40% family history of CVD, 11.66% cardiovascular procedures, 13.24% chronic pulmonary disease, 9.53% atrial fibrillation, 1.11% heart valve disease, 6.74% peripheral vascular disease, 0.45% pericardial disease, 7.91% hypothyroidism, 17.41% angina, 3.23% rheumatoid arthritis, 0.54% cardiomyopathy. In terms of medications: 26.08% of the cohort were treated with angiotensin-converting enzyme inhibitors (ACEI) and angiotensin-II receptor blockers (ARB), 27.63% lipid-regulating drugs (statins), 15.56% alpha-blockers, 7.11% anticoagulants, 47.42% antiplatelets, 31.47% beta-blockers, 30.92% calcium-channel-blockers, 16.81% diabetes mellitus treatment, 28.25% antianginal, 12.55% diuretics and 57.70% any antihypertensives including centrally-acting (e.g. Methoserpidine), Vasodilators or combined (e.g. beta/thiazide/potassium).

Conclusions: This paper identified the baseline characteristics (biological, comorbidities, medication and deprivation) of an MI cohort in England, UK between 2006 and 2014 and based on the CPRD Aurum database. From the comorbidities the highest was hypertension, while for the medications was the antihypertensives. It was also noticed that males tend to survive more than females after a first MI within the considered time window.

Acknowledgment: The authors would like to thank to the Heart Research UK – Translation Research Project Grants for supporting this work.

Details of ethics approval

Granted 28 August 2021 by Independent Scientific Advisory Committee (ISAC) (protocol 20_177R).

Evaluation Of Healthcare Service Use of People at The End of Life in North-West London

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Background: In 2019, there were 530,841 deaths registered in England and Wales. The majority of people receive some form of care at the end of life. It can require difficult choices between care options, having to balance the possibility of a marginal benefit of treatment against the impact this may have on the quality of life for the patient and family care givers. The last few months of life can often involve multiple hospital admissions, extended stays, and numerous consultations and referrals. In 2008 the Department of Health set out a clear strategy for improving care at the end of life, leading to a number of national and local initiatives to promote better access to alternatives to hospital care at the end of life. The aim of this study was to describe overall use of healthcare service by people at the end of their life.

Methods: We used the Discover database, which contains patient-level information related to primary, secondary and other (community, social and mental care) healthcare service use in North-West London. Patients who died between 1 January 2016 and 31 December 2019 were included in the study. A two-step cluster analysis was performed to identify groups of patients with similar healthcare service utilisation (13 healthcare variables were included). Healthcare use within groups was described by comparing group mean with the overall population mean. Descriptive comparison of patient characteristics and outcomes (the proportion of deaths in hospital, the proportion of hospital admission related to falls/fractures) between groups were performed.

Results: A total of 40,150 patients were included in the analysis. Around 51% of patients were males and age 45-75 years old. Almost 23% of patients were not frail as measured by the electronic Frailty Index; however, almost 50% were overweight or obese. The majority of patients used mainly secondary healthcare service (outpatients appointments, A&E attendances, and emergency hospital admissions). Social care and mental health services were least used. 40.9% died in hospital and 12.9% and 6.4% had at least one admission related to falls or fractures during the 12 months before death, respectively. The k-means cluster analysis identified eight clusters based on patient healthcare utilisation patterns. Cluster three had lower overall healthcare use compared with the population mean. Cluster seven was characterised by high mental healthcare use, while cluster four was characterised by higher primary care and outpatient care use and lower other secondary care, social, community and mental health care use. Cluster one had high other (non-GP) primary care, social and community care use. Other clusters had a higher than population average use of specific care settings. Looking at patients' characteristics, cluster three consisted of higher proportion of non-frail patients (43.3%), higher proportion of patients without any long-term conditions (73.4%) and higher proportion of patients under 45 years old (11.6%). In cluster one, patients were older (over 60% were age 85+), female (56.4%), frail (93.1%) and had at least one long-term condition (49.7%). There was a wide variation between clusters in the proportion of patients who died in hospital (13.2% to 58.7%) and in the proportion of patients who had admissions related to falls (1.4% to 28.0%) or fractures (0.8% to 13.7%).

Implications: We found huge variation in the proportion of deaths occurring in hospital in NW London between types of patients. Cluster analysis can help to identify potential opportunities for service reconfiguration, ultimately resulting in a better end of life for patients that is more in line with their wishes.

Bringing Together Public and Private Data to Explore the Impacts of Digital-First Primary Care Before and During a Pandemic

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Background: In the last few years, GP practices have started to provide primary care consultations using digital-first models in which patients are first triaged and consultations are conducted remotely rather than face-to-face if appropriate. The introduction of these new access pathways was already accelerating due to the contract reform framework requiring all GP practices to offer online and video consultations by April 2021, but increased exponentially during the COVID-19 pandemic, when all GP practices were encouraged to adopt total triage and remote consultation. The ability to access care remotely promises to deliver faster and easier access to care and to decrease pressures on GP workload. In this presentation we bring together a series of analyses exploring the impact of total triage and remote consultation on patient demand, hospital utilisation and prescribing patterns at GP practices in England which adopted askmyGP, an approved NHS England supplier of online triage and workflow services. We evaluate pre-pandemic impacts in 2019 by contrasting 'early adopter' practices that had already started using askmyGP to those that had not. We also describe trends at these early adopter practices during the pandemic in order to understand any COVID-19 related impacts.

Methods: We identify 'early adopter' practices which started to use askmyGP for total triage and remote consultation in 2019, before the pandemic began. For comparison, we also identify 'late adopter' practices which only started to use askmyGP after the pandemic began. We obtained data on hospital utilisation from Secondary Uses Services (SUS), and on prescribing patterns from OpenPrescribing, which we also linked to publicly available data. We used difference-in-differences to compare rates of hospital utilisation, and a synthetic control method to compare prescribing patterns, between early and late adopter practices in 2019.

Results: The digitally mature early adopter practices were able to adapt quickly to the demands of COVID-19. As the pandemic progressed, these practices demonstrated resilience by responding flexibly to ongoing variations in demand for care. During 2019 there were an average of 3% fewer A&E visits in early compared to late adopter practices. We found no significant difference in rates of emergency admissions. During the pandemic, the rates of A&E visits and emergency hospital admissions at the early adopters fell dramatically in line with national trends.
We found no significant impact of total triage and remote consultation on prescribing patterns for antibiotics, opioid analgesics or anti-depressants during 2019. During the pandemic, year-on year prescribing patterns for these medicines at both early and late adopters were in line with national trends.

Implications: These results provide early evidence that total triage and remote consultation may enable practices to respond rapidly to variation in demand for services and have the potential to reduce A&E visits. More work and data is required to understand the precise mechanisms underlying these and other impacts on patients, the workforce and the wider health care system.Our analysis is of limited generalisability as it only looks at a single provider. Also, the analyses are at GP practice level and do not take account of the characteristics of individual patients. Moreover, the dramatic changes in the way the NHS service now operate as a result of COVID-19 mean that these findings may not be directly applicable. For the NHS to continue to learn from such evaluations, it is important that health care providers, commissioners and evaluators work together to create an environment that allows access to better quality and more meaningful data. We are working on data access agreements with other digital suppliers to bring together more public and private data. Please get in touch if you are interested in sharing your data.

Impacts Of Primary Care Direct User Charges in EU Countries on Efficiency, Equity, And Public Acceptability: A Systematic Review

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Background: Health systems across the European Union (EU) face exigent healthcare needs amidst the COVID19 pandemic. This growing gap in available resources is likely to lead to increased taxation or cost-sharing strategies. Thus it is important to establish what are the intended and unintended consequences of applying user charges in primary care. We aimed to summarise the impacts of primary care user charges in EU countries pertaining to efficiency, equity, and public acceptability.

Methods: We searched 8 databases up to June 2020, followed by screening, data extraction and synthesis as per the Cochrane and PRISMA standards.

Results: Seventeen studies were included out of 1,834 studies identified. User charges display varied ability to impact the utilisation of primary care across EU countries, although there are some population subgroups for whom utilisation appears to remain relatively unaffected. User charges had the most significant impact on equity of access by age and health status. More generally, there is statistically differential utilisation amongst key vulnerable subpopulations, in response to various changes in user charge policies. Public acceptability of user charges was generally favourable, though studies relevant to this outcome were limited.

Implications: User charges have varied impact on utilisation and the distributional equity of care. If implemented, cost-sharing policies should be designed to mitigate their impact on vulnerable populations and safeguard the general population against catastrophic risks. We found that user charges have a limited impact on cost containment or as a source of revenue procurement. Efficiency, equity, and public acceptability goals may be better targeted through a variety of alternative policy measures.

The Decision Study: Dementia and Cognitive Impairment in The Older Prisoner Population of England and Wales. Identifying Individual Need and Developing a Skilled, Multi-Agency Workforce to Deliver Targeted and Responsive Services.

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round: There are currently 13,795 older people in the prison population across England and Wales, constituting 17% total [1]. Prisoners aged 60 and over are the fastest growing group, with an increase of 62% between 2011 and 2019 e to overall population ageing, a rise in convictions for historical offences and increases in sentence lengths [3].

number of older prisoners continues to rise, an increase in those diagnosed with dementia is expected. The prevalence cognitive impairment (MCI) and dementia amongst the prison population is largely unknown. Prevalence estimates kely due to discrepancies in assessment measures used and there are no data at all about older female prisoners in d and Wales.

t service provision for older prisoners with MCI and dementia is often suboptimal and dependent on the enthusiasm of champions", their work unsupported by a national strategy or guidance for commissioners.

Aims:

- Estimate the current and likely future prevalence of dementia among the prison population in England and Wales
- Establish the degree and type of impairment, risk of reoffending, needs and social networks of those with a likely diagnosis of dementia or MCI
- Validate the 6-CIT screening tool for routine use in prisons to aid early and consistent identification of older prisoners with possible MCI or dementia.
- Identify service needs and appropriate care pathways for older prisoners with cognitive impairment throughout custody and on release into the community.

ds: A random sample of prisoners aged 50 and over were screened using the MoCA and the 6CIT. Participants who ed in on the MoCA were invited to participate in a full needs assessment which incorporated the Addenbrooke's ive Examination – Third Revision (ACE-iii) and a range of standardised assessments to establish degree and type of ment; risk of violence; activities of daily living needs; mental health needs; history; and social networks.

ntify service needs and develop a comprehensive care pathway data from the prevalence study were used to create oups of people with similar care needs, from which were developed a series of representative case studies. Each case was presented to multidisciplinary staff from prison and community settings with staff asked to design an appropriate ackage for each. Key themes were identified which formed an initial draft of as assessment and treatment care pathway. er workshop was held with professionals to adjust and further develop the final pathway.

gs: Across the whole sample (n=869), the prevalence of dementia and MCI was 8.1% and we estimate that there are ly 1,090 older prisoners with suspected MCI or dementia in England and Wales. The 6-CIT was not considered an e tool for identifying potential MCI or dementia among the older prisoner population.

al pathway outlines the steps to be taken within prison and community services to streamline the diagnostic process dress this groups needs.

ations: This is the first study to establish the prevalence of dementia and MCI among male and female prisoners in the d to estimate their service needs, resulting in an operationally relevant assessment and treatment care pathway. Future ch will consider how the care pathway should be delivered in prison and how it may need to be adapted for different of prisons. Proposed environmental changes, including the development of dementia-friendly prisons, should be ted by assessing the outcomes in terms of improved well-being and orientation.

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Mind The (Health) Gap: Quantifying Poorer Health Among Informal Carers

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Background: Informal caring can be physically and emotionally demanding, with consequences for carer's health and well-being. Informal caring is becoming recognised as an important social determinant of health, but evidence clearly quantifying the extent to which carers' health differs from non-carers is limited. Understanding the 'health gap' for informal carers is timely and important to inform policy decision making. This rapid review examines the available evidence on health inequalities for informal carers, including young carers, when compared to non-carer peers.

Methods: We undertook a rapid review using Cochrane methodology, and a review protocol developed in collaboration with an information scientist. We took a broad definition of carers to include any individual providing unpaid care to another person needing support due to illness or disability. We included carers from all ages and conceptualised health outcomes to include any well-validated measures of physical health, mental health, or quality of life. Our electronic search was limited to studies published in OECD countries and in English between 2015 and 2020 in ASSIA, CINHAL, SCOPUS, Medline, SSCI, HMIC and PsychINFO databases. Studies were only included if they had an explicit comparison of health outcomes between carers and non-carers. Results were summarised narratively. Risk of bias was assessed using the Mixed Methods Appraisal Tool.

Results: A total of 30 studies met our inclusion criteria, following title and abstract screening (n=1992) and full text review (n= 47). These studies included data on a range of health outcomes including quality of life (n=18), measures of mental health such as depression and anxiety (n=7), self-rated health (n=3) and well-being (n=2). The vast majority of studies, 94 per cent, focused on adult carers, with only two out of 30 studies including data on health outcomes among young carers (18 years or under). Two thirds (n=20) of the included studies were observational and used a cross-sectional design. Most studies were located in Europe or the UK (n=15) and focused on caring for a particular patient group for example neurological conditions including Alzheimer's and dementia (n=6), mental illnesses including psychosis or schizophrenia (n=5) or cancer (n=3). Evidence consistently showed that informal caring was associated with poorer health outcomes. In comparison to non-carers, 18 studies reported lower health-related quality of life among carers; two reported poorer self-rated health; and two further studies found evidence of lower well-being. Seven studies found higher levels of anxiety, depression and/or stress among carers. Only one study observed that caregiving status had a positive impact on health and four studies concluded that caregiving had a minimal to no impact. 10 studies showed differences in health among carers, with younger (n=4) and female (n=5) carers experiencing worse health outcomes.

Implications: There is strong evidence that informal carers experience poorer health in comparison to non-carers; this evidence is consistent across different international contexts and caregiving populations. Our review highlights heterogeneity among carers, showing that younger and female carers are at risk of worse health outcomes. The increased reliance on informal carers to assume greater responsibility as a result of the reduction of local social services due to Covid-19 risks widening the health inequalities gap between carers and non-carers even further. Poor health among carers potentially has important implications for the use of NHS services and for individuals' economic participation in society. Policymakers need to recognise caring as an important social determinant of health and prioritise better support for carers as part of a policy focus on reducing health inequalities.

Valuating The Effectiveness of The NHS DPP Programme at Reducing Conversion of NDH to T2DM, Using the Clinical Practice Research Datalink (CPRD)

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Background: The NHS Diabetes Prevention Programme (NDPP) is a joint effort by the NHS and Public Health England to implement a behaviour-change programme to those patients who are at risk of developing Type 2 Diabetes Mellitus (T2DM). People who have raised blood glucose levels but not in the diabetic range are identified as those at risk of developing T2DM and this condition is known as Non-Diabetic Hyperglycaemia (NDH). The aim of the study was to explore the effectiveness of the NHS DPP at reducing conversion of NDH to T2DM, using the Clinical Practice Research Datalink (CPRD).

Methods: The programme is delivered by non-NHS providers, but most of the participants are identified and referred by GP practices. CPRD is one of the largest active primary care databases of electronic health records (EHR) in the UK. We used data from the CPRD AURUM dataset which contains data from the EMIS software system. To study the effectiveness of the programme we used data from the post-intervention period and compared NDH to T2DM conversion rate between patients referred to the scheme versus matched patients not referred, within the same practice. Patients were matched based on age (within 3 years), sex and the within 365 days of NDH diagnosis. The primary outcome is conversion to T2DM within a year. Cox proportional-hazards models evaluated predictors of conversion. The final matching cohort included a total of 76,705 participants with 18,413 cases and 58,292 controls

Results: The mean age of the cohort was 64.6(SD=12.6) years, and 52% were female. The mean BMI of the cases and controls were similar (Cases: 30.8[SD=6.5]; Controls: 30.0[SD=6.3]). However, those referred to the programme were more likely to be obese. Ex or current smokers were more likely to be referred to the programme, with cases having 46% of current smokers and 35% of ex-smokers. A total of 3036 participants developed Type 2 Diabetes (T2DM) in the study period. The differences in conversion rates between the two groups will also be presented. Females were less likely to convert to T2DM with a HR of 0.9(95% CI: 0.85 to 1.00) compared to men. Individuals aged 85 years and over were less likely to develop T2DM compared to those aged 18-34, with a HR of 0.58(95% CI: 0.3 to 0.93). People with high BMI had a much higher risk of conversion to T2DM, with those classed overweight (BMI 25-30) having a HR of 1.45 (95% CI: 1.21 to 1.74), and those classed obese (BMI>=30) having a HR of 2.1 (95% CI: 1.8, 2.5), compared to individuals with a normal BMI (18.5 to 25). Having depression at baseline slightly increased the risk of conversion (HR=1.14, 95% CI 1.04, 1.24). Those who had a prescription for metformin were at a higher risk of developing T2DM with a HR of 3.3(95 % CI 2.7 to 4.2).

Conclusion: People who were smokers, depressed, with high BMI were at increased risk of conversion to T2DM. Our final findings on the effectiveness of the programme will be confirmed once we also conduct further analysis which will be across practice matching to control for potential unmeasured confounding in referrals, by matching referring practices to non-referring practices over a set time period.

Funding: This manuscript is independent research funded by the National Institute for Health Research (Health Services and Delivery Research, 16/48/07 – Evaluating the NHS Diabetes Prevention Programme (NHS DPP): the DIPLOMA research programme (Diabetes Prevention – Long Term Multimethod Assessment)).

Lessons From the Pre-COVID Era to Reduce Surgery Cancellation in The English NHS

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Background: In the coming months, most healthcare systems will face monumental challenges to reduce waiting lists created by the pandemic. Data from NHS England reveals that, as of October 2020, 162,888 people were waiting for more than 52 weeks for hospital treatment in England alone. This new challenge provides an opportunity to reflect and learn from past mistakes and improve Healthcare Delivery Systems (HDS) in the English NHS. The global prevalence of On the Day of Surgery (OTDS) cancellations is as high as 18%. OTDS cancellations result in significant emotional distress for patients and their families, negatively impact waiting lists, and create significant waste in HDSs, yet little is known about the causes. Surgical care environments demonstrate high variability and uncertainty due to sharing resources with emergency patients, the interconnected nature of care processes and care delivery of patients with varying clinical and socio-economic complexity. A combination of this high variability, uncertainty and high autonomy of actors (i.e. healthcare workers) tends to create emergent behaviours, suggesting that scheduled care systems behave like complex systems. This multi-centre study aims to understand OTDS Cancellation Rates(CRs) and the reported reasons for cancellations, and this is the first known multi-centre study of OTDS cancellations focus on large university NHS trusts in England.

Method: Three large NHS trusts from the North, Midlands and South regions of England participated in the research. Over 12 months (April 2017 – March 2018) 10,147 scheduled surgery cancellation episodes and 81,699 completed surgeries were analysed. Patient-level cancellation data and completed surgery data were extracted from hospital information systems.

Results: The three NHS trusts recorded the following OTDS CRs: 9.93 (3,787/34,357), 12.38% (3,977/28,151) and 11.05% (2,383/19,191). Patients undergoing surgery with high clinical complexity, requiring overnight post-operative care, reported high OTDS CRs, range from 11.14% (1,151/9,185) to 17.19% (844/4,067). The main reasons for OTDS cancellations include patients being unfit for surgery, which varies between 30.03% and 38.50% across the three NHS trusts. Other frequent popular reasons for cancellations are 'Did Not Attend' (DNA), 'unavailability of beds' and 'lack of theatre time'.

Implications: The findings highlight that OTDS cancellations pose significant challenges. It is concerning that patients with high clinical complexities are more likely to have their surgery cancelled in the English NHS. It is also surprising to identify the main two reasons for surgery cancellations – 'patient is unfit for surgery' and 'DNA' – which suggests room for improvement in care planning and communication. NHS trusts use subjective reasons to record surgery cancellations in their Information systems, highlighting negative reporting impact on the validity and reliability of the national performance indicators related to surgery cancellations. The study also found that poor data quality in NHS hospitals creates significant challenges in developing evidence and improving scheduled care systems. Limitations in social and primary care policies have created patient flow complications in acute care hospitals, and failures in care design in hospitals have led to high OTDS cancellations, resulting in high wastage of resources. For patients who have waited for more than 52 weeks, cancellation of their surgery on the day can be devastating for them and their families and embarrassing for everyone in the NHS. To reduce the waiting lists that have resulted from COVID-19 interruptions, policymakers need to create favourable contexts in the wider health economy. Hospitals need to focus on improving care design processes, which reflect on the complexity of scheduled care systems to reduce OTDS cancellations. To tackle this global problem, it is important that future research focus on understanding the underlying root causes of OTDS cancellation by embracing the complexity of this multi-factorial phenomenon as well as the HDSs in which they operate.

A Retrospective Analysis Exploring the Characteristics of Non-Urgent ED Attendances in Children and Young People

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Background: Finding solutions to unsustainable emergency department (ED) demand is a focus of UK health policy. There were 24.8 million attendances at EDs in 2018-19, an increase of 4% since 2017-18 alone. ED demand by children and younger people (CYP) is higher than in adults. During 2015/16, there were 345 ED attendances for every 1,000 adults aged 25 and over, and 425 ED attendances per 1,000 in CYP. A significant proportion of ED attendances in CYP maybe non-urgent attendances (NUA), which could be better managed in non-hospital settings. A better understanding of CYP NUAs to ED is needed before possible solutions can be considered. Therefore, we measured the number of NUAs in CYP to ED in a large English region and explored which CYP present in this way and when.

Methods: We analysed a dataset extracted from the CUREd research database. The CUREd research database contains over 23 million linked patient episodes of care. The linked episodes of care include all attendances to accident and emergency (A&E) departments and inpatient admissions from the 13 acute hospitals trusts in the Yorkshire and Humber region; as well as all calls to NHS 111 and the 999 emergency ambulance service in the same region, between April 2011 and March 2017.

The data extract comprised pseudoanonymised ED attendance data for all CYP (aged from 0 to 15) who attended a type 1 ED (consultant-led, multi-specialty 24-hour services with full resuscitation facilities and designated accommodation for the reception of ED patients), in Yorkshire and Humber, from April 2014 to March 2017. Using a previously validated definition, NUAs to ED were defined as all first-time attenders to ED, not receiving any treatments, investigations or referrals which required the level of care provided by such a facility. Descriptive statistics were used to examine the characteristic of NUAs and UAs, which were: Age at arrival age categorised as <1, 1-4, 5-9, 10-14 and >15, mode of arrival, deprivation and time of arrival; Out of hours (OOH) was defined as: 8am to 6pm Monday-Friday and all weekend). Odds ratios between NUAs and UAs were calculated using logistic regression. Summary statistics compared the waiting time, treatment time and total department time for NUAs and urgent attendances (UAs).

Results: 208,788 of 977,907 (21.4%) first time ED attendances were NUAs. NUAs in CYP were more likely in the youngest age categories. Using under 1's as the reference age category, the odds of a NUA were 0.82 (95% CI: 0.80, 0.83) in 1 to 4s, 0.61 (95% CI: 0.61, 0.63) in 5 to 9s, 0.40 (95% CI: 0.40, 0.41) in 10 to 14s and 0.39 (95% CI: 0.38, 0.40) in age 15. There were increased odds of a NUA OOH compared to a NUA in hours (OR 1.19, 95% CI 1.18, 1.20). This OOH effect was more prominent in the younger age children. Using under 1's as the reference age category, the odds of a NUA OOH was 0.87 (95% CI: 0.84, 0.89) in the 1-4s, 0.80 (95%CI: 0.77, 0.82) in 5 to 9s, 0.60 (95% CI: 0.58, 0.62) in 10-14s and 0.66 (95% CI: 0.63, 0.69) in age 15. CYP NUAs also spent less time in the ED, with a median (IQR) of 98 minutes (60-147) compared to 127 minutes (80-185) for UAs.

Implications: A substantial proportion of ED attendances in CYP in this large region of England are NUAs, amenable to care in alternative lower level UEC setting. Improved alternative provision in the community for CYP with NUAs during out of hours' periods, such as the early evening may reduce these types of ED attendances.

Longitudinal Analysis of Multimorbidity and Primary Care Consultations: Evidence from South London

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Background: The clinical complexity of multimorbid patients is heterogenous, influenced by the number of long-term conditions (LTCs), symptom intensity, and comorbidity interrelatedness, among other factors. Some co-occurring diseases interact with each other to a larger extent than others and may impact differently on primary care use. Existing research assessing the relationship between multimorbidity and primary care consultations is mostly cross-sectional and rarely accounts for disease severity or the relationship among LTCs. The impact of multimorbidity on different types of primary care consultations, defined by provider type and delivery mode, remains unexplored.

Methods: This study assessed the relationship between multimorbidity and primary care consultations among a working age population registered to GP practices in South London between 2005 and 2020. Primary care consultation rates (per patient-year) by provider type (GP, nurse, other healthcare professional) and delivery mode (face-to-face, telephone, home visit) were modelled separately using Generalised Estimating Equations with negative binomial distribution and log-link. Key control variables included 5 multimorbidity clusters (Cluster A-E), total number of LTCs, interaction effects between clusters and total number of LTCs, and a polypharmacy indicator (as a proxy measure of symptom intensity or disease severity). Models also adjusted for age, gender, ethnicity, socioeconomic deprivation, language, and year fixed effects.

Results: The study sample included 826,166 adults (5,243,478 person years). Adjusting for symptom intensity, multimorbidity nearly doubles or even triples primary care consultation incidence rates across provider types and modes of delivery (IRRs =1.92 to 3.83, with IRR=2.3, 95% CI:2.29-2.32 for total primary care consultations), particularly home visits (IRR=3.83, 95% CI 3.75-3.91). The impact of developing one more LTC on primary care consultations varies by multimorbidity cluster ($p<0.0001$). The largest effect for all primary care consultation types, except for nurse consultations, is observed in cluster E (alcohol dependency, substance dependence, and HIV). For nurse primary care consultations, cluster D (liver disease, viral hepatitis) shows the largest increase when an additional LTC arises.

Implications: Transitioning from a single-disease to a cluster-medicine oriented delivery model is considered a way to improve care for people with multimorbidity. This paper informs this effort by identifying, based on 15 years of data, disease clusters with the highest primary care needs.

Defining Place in Health and Care Policy

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Background: The concept of place as a spatial unit for the delivery of integrated health and care is a key pillar of current policy, including the NHS Long Term Plan and Integrated Care System (ICS) guidance. Despite its prominence, how place is identified and operationalised – nationally and locally – is ill-defined by policymakers. There is little clarity on how the different spatial levels of the health and care system (ICSs, places, and neighbourhoods) should interact with one another with regards to accountability, decision-making, funding, and service delivery. The lack of practical details underpinning high-level policy ambitions are to the detriment of establishing equitable, efficient, and sustainable integrated care models at local level. Whilst promising examples of place-based partnership working are emerging, the absence of a clear and robust framework for how place should be defined and operate means these partnerships are currently based on shaky foundations, with limited legislative powers to override institutional interests and prioritise place. This presentation will give an overview of key perspectives on place from a geographical, sociological, historical, and political context, discuss how these apply to current place-based policy, and suggest where policy may be expanded upon to address existing gaps.

Method: The findings in this presentation are the result of a review of the literature concerning place and decentralisation policy in English public services. Key themes emerging were then considered alongside recent place-based policy (the last decade) to place these within the relevant policy context.

Results: Place has featured in health and care policy since the NHS was established, however its form, prominence, and role has varied greatly over time. Reorganisations of the NHS have resulted in the geographical boundaries of place being re-drawn frequently, with co-terminosity between health and local authorities falling in and out of favour. Place is therefore not a new concept in health and care policy; however, the historical context of previous place configurations and the lasting impact on present place-based working is often not given due consideration in policymaking. Different actors within a place define it through different lenses: patient flows (NHS), electoral boundaries (local authorities), or personal/social (local people). Reconciling these perspectives is challenging and current policy does not account for such a multi-faceted definition of place. Recent guidance regarding ICSs and place presents place as a neat, fixed, and obvious. For the purposes of creating ICSs, place appears to serve as a technical exercise to support the funding and organisation of local health and care services. However, the geographical literature considers place to be complex, relational, and fluid. Local people using health and care services do not necessarily acknowledge to arbitrary boundaries nor will be confined by them. Furthermore, the presentation of place as a coherent entity often misrepresents communities as homogenous with identical needs and wants despite being diverse group of individuals whose primary common trait is physical geography. This may result in widely differing health and social care needs being overlooked.

Implications: The definitions of system, place and neighbourhood in the NHS Long Term Plan and ICS guidance fail to give any meaningful consideration to the diverse interpretation of place by different actors within the health and care system. Despite expressing an ambitious vision for a holistic approach to public services at place to address all determinants of health and wellbeing, the execution of policy remains focused underwhelmingly on place as a technical entity for planning and organising care. How the squaring of more ideological notions of place with the understandable need to draw boundaries somewhere for organisational, financial and accountability purposes should be approached remains unclear in policy, limiting the full potential of place-based care.