



Joint Public Health Annual Conference:

'Picking up the pieces – Public health and COVID-19'

Tuesday 17 November 2020
Live web conference



Institute of
Public Health



Conference purpose

The Public Health Agency, Institute of Public Health in Ireland, Queen's University Belfast and Ulster University are hosting a scientific conference focusing on how COVID-19 has affected the lives of our citizens, with a particular focus on how the pandemic has impacted the crisis of inequalities across several aspects of life. This joint event aims to raise the profile of public health research, interventions and innovation and engage local professionals, practitioners and researchers working in the broad field of public health.

In addition to the keynote plenary sessions delegates will have the opportunity to participate in a number of parallel sessions showcasing the impact that the COVID-19 pandemic has had on society, how this has affected inequalities and how we begin to recover from this.

Twitter

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The hashtag for the conference is #publichealthni20

Programme (Times are subject to change)

10.00am **Welcome Dr Janice Bailie**, Assistant Director HSC Research and Development Division, Public Health Agency

10.00am **Minister's Address – Minister Stephen Donnelly**
Minister for Health, Ireland

10.05am **Minister's Address - Minister Robin Swann**
Minister for Health, Northern Ireland

10.15am **Keynote Speaker – Professor Sharon Friel**, Professor of Health Equity and Director of the Menzies Centre for Health Governance at the School of Regulation and Global Governance (RegNet), Australian National University.

10.45am **Parallel workshops (see abstracts on page 4-9)**

1

**Nutrition, alcohol
and tobacco
consumption**

2

Mental health

3

Social distancing

4

Loneliness

11.45pm **Lunch – Poster presentations**

12.15pm **Keynote speaker – Professor Susan Michie**, Professor of Health Psychology and Director of the Centre for Behaviour Change at University College London & Co-Director of NIHR's Behavioural Science Policy Research Unit.

12.45pm **Parallel workshops (see abstracts on page 10-16)**

1

**COVID-19
incubation and
excess mortality**

2

**Health-related
behaviour and
physical activity**

3

**Understanding the
impact of COVID-19**

4

**Community
response**

1.45pm **Closing remarks – Professor Hugo Van Woerden**, Public Health Agency, Director of Public Health

2.00pm **Close**

Keynote Speakers



Professor Sharon Friel

Professor of Health Equity and Director of the Menzies Centre for Health Governance at the School of Regulation and Global Governance (RegNet), Australian National University.

Sharon Friel is Professor of Health Equity and Director of the Menzies Centre for Health Governance at the School of Regulation and Global Governance (RegNet), Australian National University. She was Director of RegNet from 2014-2019.

She was the Head of the Scientific Secretariat (University College London) of the World Health Organisation Commission on the Social Determinants of Health between 2005 and 2008. She is a Fellow of the Academy of Social Sciences Australia and co-Director of the NHMRC Centre for Research Excellence in the Social Determinants of Health Equity. In 2014, her international peers voted her one of the world's most influential female leaders in global health.

Her interests are in the political economy of health; governance, policy and regulatory processes related to the social determinants of health inequities, including trade and investment, food systems, urbanisation, climate change.



Professor Susan Michie

Professor of Health Psychology and Director of the Centre for Behaviour Change at University College London & Co-Director of NIHR's Behavioural Science Policy Research Unit.

Susan Michie, FMedSci, FAcSS is Professor of Health Psychology and Director of the Centre for Behaviour Change at University College London. She is co-Director of NIHR's Behavioural Science Policy Research Unit, leads UCL's membership of NIHR's School of Public Health Research and is an NIHR Senior Investigator.

Professor Michie's research focuses on behaviour change in relation to health and the environment: how to understand it theoretically and apply theory to intervention development, evaluation and implementation. Her research, collaborating with disciplines such as information science, environmental science, computer science and medicine, covers population, organizational and individual level interventions. Examples include the Human Behaviour-Change Project and Complex Systems for Sustainability and Health. She is an investigator on three Covid-19 research projects.

She serves as an expert advisor on the UK's Scientific Pandemic Influenza Group on Behavioural Science (Covid-19) and is a consultant advisor to the World Health Organisation on Covid-19 and behaviour. She is also expert advisor to Public Health England and the UK Department of Health and Social Care, is Chair of the UK Food Standard Agency's Social Sciences Advisory Committee and chaired the Academy of Social Science's 'Health of People' project.

Parallel workshops

The parallel workshops will highlight public health innovations, research and evidence-based practice across the island of Ireland.

Delegates will have registered for parallel workshops, four presentations in the morning and four presentations in the afternoon. Each presentation will last eight minutes with the remainder of the session for audience discussion and questions.

Morning parallel workshops

Parallel workshop 1 – Nutrition, alcohol and tobacco consumption

Chair: TBC

Abstracts

1. Identifying nutritional issues affecting communities in NI during COVID-19

Authors - Collette O'Brien & Fiona Armstrong on behalf of Public Health Dietitians Group Northern Ireland

Miss Fiona Armstrong, Public Health Dietitians Group Northern Ireland

Background: COVID-19 has impacted people's lives significantly, putting additional pressures on food choices, shopping and eating habits. The Public Health Agency (PHA) commissioned Public Health Dietitians Group Northern Ireland (PHDGNI) to train tutors from statutory, community & voluntary organisations in a range of community nutrition education programmes (CNEP). Tutors deliver programmes to their community based on local need. During the pandemic communities have become more reliant on foodbanks with one report showing a 177% increase in food parcels distributed in May 2020 compared to May 2019. (1)

Method: A Citizen Space survey was designed by PHDGNI and distributed during July 2020. It targeted organisations and tutors who had previously been trained in a range of CNEP from statutory, community and voluntary organisations. Respondents were asked to rank their nutrition education needs, if they had an interest in receiving advice/support and interest in delivering a newly developed online version of CNEP's. Confidence on using technology was also explored.

Results: 122 responses were received. Tutors expressed a need for information on how to run online CNEP's for service users and support to facilitate these. However a large number of respondents expressed concern about a lack of access and engagement in virtual delivery by their communities, particularly from lower socioeconomic areas, elderly and individuals with mental health conditions.

Discussion: The survey results indicate tutors are keen to receive support from PHDGNI to deliver online programmes. CNEP's such as, Cook it! and Food Values, educate participants to cook low cost nutritious meals. PHDGNI have created and piloted virtual versions of these to support tutors to support their communities. Tutors highlighted lack of access and engagement of some community groups in virtual platforms, thus there is still a need for CNEP to be delivered in person. PHDGNI will therefore support the delivery of CNEP to these groups adhering to Government guidance and including financial support. Other nutrition gaps identified were healthy eating and ideas for low cost family meals. With an abundance of online information it's vital that evidence based nutrition information is provided and PHDGNI are ideally placed to do this and have developed a suite of free webinars to support the issues identified through the survey.

Implications: These results are vital for the planning, development and delivery of the Rebuilding Health and Social Care Services – Strategic Framework.

2. Factors associated with changes in alcohol and tobacco consumption during COVID-19 'lockdown'.

Authors - Ciara ME Reynolds, Joanna Purdy, Lauren Rodriguez, Helen McAvoy

Dr Ciara Reynolds, Institute of Public Health

Background: The impact of the public health social measures introduced in response to the pandemic on health behaviours are poorly understood. We aimed to identify factors associated with changes in alcohol and tobacco consumption among drinkers and smokers during COVID-19 'lockdown' in the Republic of Ireland.

Methods: This study used secondary data from the Central Statistics Office (CSO) Social Impact Survey collected during the lockdown period of COVID-19 in Ireland (April 23rd-May 1st, 2020). A total of 4,033 Individuals were selected from previous CSO survey participants aged >18years and issued with the survey. Data were analysed by logistic regression using SAS software.

Results: Of the 1,362 participants, 80.6% consumed alcohol and 26.0% consumed tobacco. Among drinkers, 17.2% reported that their alcohol consumption had decreased, 22.2% reported it had increased, and 60.6% reported that it had not changed since lockdown. Among smokers, 8.6% said their tobacco consumption had decreased, 30.5% reported it had increased, and 60.9% reported no change. Being concerned about household stress from confinement (aOR 1.9, 95% CI 1.3-2.9, p=0.002), working from home (aOR 2.1, 95 CI 1.4-3.3, p<0.001) and urban living (aOR 2.0, 95 CI 1.5-2.9, p<0.001) were associated with increases in alcohol consumption. Feeling very nervous (aOR 2.2, 95% CI 1.2-4.0, p=0.009), feeling downhearted/depressed (aOR 2.4, 95% CI 1.3-4.4, p=0.004), being concerned about someone else's health (aOR 2.0, 95% CI 1.1-3.9, p=0.031), working from home (aOR 2.3, 95% CI 1.0-5.3, p=0.046) and increases in alcohol consumption (aOR 3.6, 95% CI 1.7-7.7, p=0.023) were associated with increases in tobacco consumption. Those who were labour inactive before COVID-19 and remained so during COVID-19 were less likely to increase their alcohol use compared to those who were unemployed before and/or during COVID-19 (aOR 0.6, 95% CI 0.3-0.9, p=0.016). Individuals living in an adult only household were more likely to decrease their alcohol use (aOR 1.6, 95% CI 1.0-2.6, p=0.039) whereas those feeling very nervous were less likely to decrease alcohol use (aOR 0.6, 95% CI 0.4-1.0, p=0.031).

Discussion: There was a mixed picture in terms of changes in consumption among current drinkers and smokers. Stress and poor emotional well-being were associated with increased tobacco use and socio-economic factors were evident in increased alcohol consumption. Overall, a widening of inequalities in harmful consumption is indicated.

Implications: The findings can inform responses to protect those most vulnerable to elevated harms from tobacco and alcohol use in the context of ongoing 'lockdown' measures.

Parallel workshop 2 – Mental health

Chair: TBC

Abstracts

1. The impact of the COVID-19 pandemic on psychiatric inpatient care in Northern Ireland

Authors - Claire Potter, Joseph Kane, Patrick Hann, Hayley Bowes, Melanie MacPherson, Tina Kenning, Daljinder Bajwa & Ciaran Mulholland

Dr Claire Potter, Queen's University Belfast

Background: “Lockdown” regulations were introduced by the Northern Ireland (NI) Executive on 28th March 2020 to restrict the spread of COVID-19. As a consequence there was disruption to delivery of community mental health care, removal of psychosocial supports to many people living with mental illness and wider mental distress for the general population. Acute psychiatric inpatient care is often required when community facilities and supports are not available and were already under significant pressure before the pandemic.

Aims and Methods: We aimed to determine the proportion of all mental health inpatients in NI for whom COVID-19 had felt to have contributed to their admission. A retrospective cross-sectional survey of all patients in acute psychiatric care in NI's five Health & Social Care Trusts on 22nd July 2020 was completed. COVID-19 was identified as contributing when the clinical team had documented it as such in electronic or written notes. Patient data was anonymised and collated within a bespoke Microsoft Excel (2016) document in line with each Trust's GDPR recommendations. Statistical analysis was completed using IBM's SPSS statistical package, version 26.

Results: As of 23/09/2020, data collection had been completed from 18 of 26 inpatient psychiatric wards across NI. Of 226 inpatients, 114 (50.4%) were male, 109 (48.2%) under the age of 45 and 135 (59.7%) were single. The majority live in the most socially deprived areas in NI. All available beds were occupied with some facilities requiring extra temporary beds to be utilised. COVID-19 was adjudged to have been a factor contributing to 67 (29.6%) of inpatient admissions and contributed to a delayed discharge in 20 (8.8%). Indirect effects of COVID-19 (such as financial pressures, loss of support from family, friends or services) were noted in 73.0% of cases. Direct effects (such as health anxiety or delusions relating specifically to COVID-19) were noted in 27.0%.

Discussion: Our results demonstrate a diverse range of factors related to COVID-19 were implicated in a significant proportion of psychiatric inpatient admissions, even several months after lockdown measures had been instituted. The large contribution of the indirect effects of COVID-19 presents a significant challenge, particularly when bed occupancy is already at 100%.

Implications: Rectifying the loss of community psychosocial support during future lockdown restrictions represents a major public health challenge. The breadth of COVID-19 related factors contributing to admission suggest that a range of approaches is likely to be favourable to a “one-size fits all” approach.

2. A systematic review to assess the effectiveness of online psychotherapy for the treatment of perinatal mental health disorders.

Authors - Rachel Black; Prof. Marlene Sinclair; Prof Paul Miller; Dr Bernie Reid; Dr Julie McCullough; Dr Paul Slater; Dr Mara Tesler Stein

Rachel Black, Ulster University

Background: The COVID-19 pandemic is having an immense impact on mental health globally (UN, 2020). The effect on perinatal mental health (PMH) has been significant with a recent survey reporting a substantial increase in the likelihood of perinatal depression and anxiety during the pandemic (Davenport et al. 2020). Maternal mental health can have an impact on infant health both antenatally and throughout the life course. Therefore, it is essential to consider alternative and effective modalities to providing psychotherapeutic treatment during this global pandemic. This paper will present the findings from a systematic literature review that asked the following question: “are online psychotherapy (O-P-T) interventions for the treatment of perinatal mental health disorders effective?”

Methods: Eligibility criteria was developed using the PICOS framework. Five electronic databases were searched: PsycINFO, Medline, CINAHL Complete, Proquest Dissertations and Theses, Scopus along with Google Scholar and The Shapiro Library to identify papers published before July 2020. Interventions were included if participants had a clinician assessed diagnosis of a PMH illness at screening, was an experimental design and had clinician involvement in the intervention. Quality was assessed using the Quality Assessment Criteria for Evaluating Primary Research Papers from a Variety of Fields (QualSyst).

Results: A total of 2567 papers were identified. Five met the inclusion criteria and the total sample was 209. The selected papers were found to be of good quality; however, treatment fidelity was not reported. Pooled effect sizes found small to medium effects favouring the intervention versus control on the reduction of depressive symptoms and in some cases remission ($d = 0.48$, 95% CI -0.07 , 1.06). Pooled effect sizes on within-group data resulted in large treatment effects for depression, anxiety and stress outcomes ($d = 1.90$; $d = 0.81$; $d = 1.05$). Attrition rates were comparable with other O-P-T interventions for mental health.

Discussion: This review provides evidence that O-P-T interventions for the treatment of PMH disorders are effective in improving clinical outcomes. There, is a need to further test online eye movement desensitisation and reprocessing (EMDR) interventions using different modalities such as videoconferencing.

Implications: This review aids in providing policy makers with evidence for the safe and effective use of O-P-T in the perinatal period. Furthermore, it demonstrates how research should be utilising the current knowledge of EMDR's effectiveness within this population and applying it to intervention design that is accessible in the current COVID-19 climate.

Parallel workshop 3 – Social distancing

Chair: TBC

Abstracts

1. Social Distancing Audit Tool

Authors - Dr Ciaran O'Gorman, Alice Fleming, Ryan Christy, Rachel Mooney, Kurtis Wilson, Sara Lavery

Alice Fleming, Queen's University Belfast

Background: The COVID-19 pandemic required Healthcare staff to adapt rapidly to changing guidance. In addition to extant infection prevention interventions, COVID-19 required assessment of physical distancing and utilisation of the built environment. Clusters of COVID-19 cases were recorded in clinical areas across the South Eastern Health and Social Care Trust (SEHSCT). Analysis of clusters revealed an association with older hospital estate, generating inequalities for patients based on where they were nursed, and inequalities for staff dependent on the departments in which they worked. The introduction of an audit tool aimed to achieve consistently high standards across all clinical areas and for all staff in SEHSCT.

Methods: A Social Distancing audit proforma was designed and tested by a group of Medical Student Technicians (MST) working within the SEHSCT Infection Prevention team. The audit tool focused on signage and adaptations to wards, and observation of practice. Institute for Improvement (IHI) Quality Improvement methodology was employed, with each audit tool version trialled on selected wards. Once a user friendly and robust tool was achieved ward managers the tool was disseminated to selected ward managers from a variety of hospital directorates and data was collated using existing nursing performance management software. The tool was also trailed in two non-patient facing areas with the intention to protect staff: Laboratories and Pharmacy.

Results: Weekly reports summarised findings, including a score out of 22. As a result, ward managers improved PPE signage, adapted staff rooms and reminded staff to social distance. Uploaded results generate graphs tracking changes, with trends showing an improvement in scores.

Discussion: In the early part of the COVID-19 pandemic infection prevention guidance evolved rapidly. It therefore took time to establish best practice. There was the additional challenge of collaborative working when patient facing staff were themselves at risk of acquiring infection. The IHI Quality improvement methodology, with its focus on small-small, rapid tests of changes, followed by step wise expansion of robust processes is well suited to driving improvement once best practice is established. The MST team integrated well, worked autonomously and were able to deliver (at pace) a tool that can be used widely within SEHSCT.

Implications: It is hoped that this audit programme will establish long term behaviour changes, drive necessary improvements in the built environment of our hospital estate and therefore reduce inequality for patients and staff. Medical students represent an underutilised human resource in healthcare settings.

2. Facilitators and barriers to following COVID-19 guidelines on social distancing among young people in Northern Ireland and Republic of Ireland

Authors - Berry, E., Bradley, D., Tully, M.A., Allen, S., Mulvenna, M., Dempster, M., Shorter, G., & McAneney, H.

Dr Emma Berry, Queen's University Belfast

Background: COVID-19 has rapidly changed people's lifestyles worldwide, and one of the most dramatic effects has been the need to social distance from others. Young people may experience social distancing guidelines as particularly challenging because of their developmental stage and lifestyles, which are typically centred on peers and relationship building. Young people have been socialising more as public health restrictions have eased, so there is a need to understand how young people can be supported in socialising in a safe way. This study aims to explore the facilitators (enabling/motivating factors) and barriers (personal and environmental/social obstacles) to young people practising social distancing.

Methods: Data for this survey-based study was collected using Qualtrics software. Young people aged 16-25 years from Northern Ireland (NI) and the Republic of Ireland (ROI) were recruited through email and social media between July and August 2020. The survey closed on August 24th prior to School/University restarts. The survey (containing closed and open-text questions) was developed and analysed by members of the Public Health Agency Behaviour Change Group. The survey items were guided by the COM-B model and Theoretical Domains framework. Quantitative data underwent frequency and regression analysis, while qualitative data underwent Thematic Analysis.

Results: Four hundred and seventy-seven valid responses were collected. Most respondents were aged 19-22, were students, and were living at home at the time of data collection. The majority of respondents reported minimal exposure to COVID-19. Most respondents knew how to social distance, and approximately half were practising this frequently. The influence of peers and shielding someone vulnerable were two out of a number of factors which influenced social distancing. Thematic analysis uncovered some of the contextual factors underpinning social distancing and will be discussed in full.

Discussion: Social distancing among young people from NI/ROI is influenced by psychological, social, and environmental factors. Many young people play an active role in reducing transmission through social distancing, but a significant proportion could be better supported to maintain this behaviour.

Implications: This study identifies the barriers and facilitators to social distancing in an important demographic group. The findings bear relevance for prospective strategies to encourage transmission preventative behaviour in young people. With a better understanding of the factors which hinder or support social distancing, public health agencies are in a better place to develop targeted interventions and health messages.

Parallel workshop 4 – Loneliness

Chair: TBC

Abstracts

1. The impact of the COVID-19 pandemic on the wellbeing of Irish Men's Shed members: Lessons from Sheds for Life

Authors - Ms. Aisling McGrath, Dr. Niamh Murphy and Dr. Noel Richardson

Ms Aisling McGrath, Waterford Institute of Technology

Background: COVID-19 disproportionately affects males, particularly those who are older and more socio-economically disadvantaged. Emerging evidence also suggests that older adults are at an increased risk of loneliness and isolation due to COVID-19 restrictions. This study assessed wellbeing outcomes among men's shed members ('Shedders') at baseline, 3, 6 and 12 months in response to a 10-week, community-based health and wellbeing program "Sheds for Life" (SFL) that aimed to engage typically 'hard-to-reach men' by employing a collaborative, gender-sensitive approach that delivered targeted health promotion in the familiar setting of the men's sheds. SFL was delivered across two cohorts on a phased basis in March and September 2019. This study compares the 6 months findings from one cohort (n=185) carried out during the COVID-19 pandemic, with 6 month findings from a comparator cohort (n=195) completed prior to COVID-19

Methods: Questionnaires assessing wellbeing (life satisfaction, mental health, loneliness, physical activity (PA), self-rated health and other lifestyle measures) were analysed in both cohorts across baseline, 3 and 6 months.

Results: Self-rated Health and life satisfaction decreased in the COVID cohort at T3 ($p < 0.001$), while loneliness scores increased ($p < 0.0005$). Higher loneliness scores were correlated with lower health ratings, life satisfaction and PA during COVID-19 ($p < 0.001$). Days PA decreased in the COVID cluster at T3 from T2 ($p < 0.01$) with those in urban areas reporting lower activity levels than rural areas ($p < 0.05$). Those sufficiently active at baseline managed to maintain PA during COVID-19 while those not meeting guidelines were more likely to report decreases ($p < 0.001$).

Discussion: This study emerged from a wider evaluation of SFL which uses an implementation science approach to translate SFL into the real-world settings of the sheds. The strong theoretical underpinnings alongside the empirical longitudinal and comparator data provides unique and timely evidence on the impact of COVID-19 on wellbeing in older Shed members in Ireland. Findings provide valuable insights into the potential impact COVID-19 can have on exacerbating the social gradient in men's health, as well as underlining the importance of gender-sensitive programs such as SFL to engage and contribute to enhanced wellbeing outcomes among 'hard to reach' groups of men

Implications: Shedders experiencing COVID-19 restrictions are at an increased risk of poorer wellbeing and increased levels of loneliness. Support and guidance is needed to safely encourage this cohort back into men's sheds, settings that protect against loneliness and positively promote health and wellbeing.

2. Does Loneliness Lead to Increased Healthcare Use In Older Adults in Ireland, north and south?

Authors - Dr Annette Burns; Prof Gerry Leavey; Dr Mark Ward; Prof Roger O'Sullivan

Dr Annette Burns, Institute of Public Health in Ireland & Ulster University

Background: Concerns around loneliness leading to increased healthcare use persist. However few papers have explored associations between loneliness and healthcare use independent of health and health behaviours and overall the evidence base remains mixed. We investigated the associations among loneliness, health and healthcare use (HCU) in older adults in Northern Ireland and the Republic of Ireland including stratification to investigate whether associations differed by gender.

Methods: Secondary analyses of The Irish Longitudinal Study on Ageing (TILDA) (W1-3) and Northern Ireland Longitudinal Study of Ageing (NICOLA) (W1) which provide representative samples of community dwelling adults and 50 and over were conducted. Primary outcomes were: self-reported GP and emergency department (ED) visits in past year. Negative binomial and logistic regression analysis were used to investigate associations between loneliness and HCU, later adjusting for potential mediators (health and health behaviours).

Results: Loneliness was cross-sectionally associated with both GP and ED visits in both cohorts. Following adjustment for health and health behaviours, an independent association between UCLA score and GP visits remained in both TILDA and NICOLA. All associations between loneliness and ED visits however, became non-significant once health and health behaviours were included. Results from stratification by sex and longitudinal analyses of TILDA will also be presented.

Discussion: Overall results in terms of links between loneliness and HCU appeared similar across these health systems, however sex stratification did not reveal the same independent associations for women in Northern Ireland. This analysis was however cross sectional and also limited by some minor differences in the variables available within each dataset.

Implications: This paper has implications for health services at a population level but also provides further support for the primary care setting as a potential opportunity for an assessment of loneliness to become routine as well as a point from which to potentially redirect towards appropriate services and tailored resources where present.

Afternoon parallel workshops

Parallel workshop 1 – COVID-19 incubation and excess mortality

Chair: TBC

Abstracts

1. Excess Mortality in the time of COVID-19: A Scoping Study

Authors - Alice Fleming & Mary Hadley

Miss Alice Fleming, Queen's University Belfast & Maastricht University

Background: COVID-19 has spread globally yet reported increases in mortality exceed those attributed to COVID. Information on the extent and meaning of this difference, the implications of using excess mortality as a measure of the impact of this pandemic and how a better understanding of COVID-19 pandemic, using excess deaths as a starting point, could prepare countries to manage the current or future pandemic situations was sparse and had not been examined comprehensively. This scoping exercise aimed to fill this critical gap.

Methodology: This study used the 6-step scoping study framework developed by Arksey & O'Malley to identify relevant information sources. Thorough searches were conducted to identify a combination of published and grey literature.

Results: The findings showed excess mortality exceeded deaths attributed to COVID-19. Many countries, including the UK, reported double the rates of excess deaths and even countries with seemingly low excess mortality attributed low proportions of this to COVID-19. Testing strategies and reporting mechanisms were found to influence mortality data. Inequalities in the quality of civil registration systems between high and low income countries impact excess mortality data. The key factors leading to non-COVID-19 deaths, other than those excluded due to testing and reporting insufficiencies, also differed between high and low income countries. Decreased access to healthcare and reduced provision of non-urgent services in high-income countries compared with disrupted preventative and disease control programmes in low-income countries were considered to have the highest impact. The economic effects of epidemic containment measures are also expected to bring more people below the poverty line in low income countries.

Discussion: The results suggest that consensus on testing and reporting strategies is required to fully understand and respond to a pandemic such as COVID-19. For this to happen, efforts are also required to improve civil registration in low income countries. Acknowledging that a proportion of the excess mortality is non-COVID-19 related indicates the balance between routine service provision and epidemic containment should be carefully assessed in both high and low-income countries. Furthermore, mitigation strategies of the negative effects of lockdown policies on the most vulnerable of society should be introduced.

Implications: Excess deaths throughout the COVID-19 pandemic demonstrate that there are both flaws in testing and reporting mechanisms and in the policies designed to contain the pandemic. These affect the most vulnerable populations and countries. The study provides concrete recommendations in both these areas.

2. A scoping review and meta-analysis of the parameters of the incubation period for COVID-19

Authors - Dr Sonam Prakashini Banka and Professor Catherine Comiskey

Dr Sonam Prakashini Banka, Trinity College Dublin

Background: In the early stages of a new epidemic where no vaccine is available all persons are susceptible. As the epidemic progresses and the number of infectious individuals increases the number of susceptible individuals will decrease. However, when an epidemic can produce both asymptomatic and symptomatic cases the identification of the numbers infected becomes more challenging. We conducted a scoping review to identify the incubation period of COVID-19, with the aim of using this information to aid modelling estimates of the hidden prevalence of asymptomatic cases in Ireland.

Methods: The review was conducted according to the PRISMA Scoping Review guidelines. Five databases were searched; CINAHL, MEDLINE, PUBMED, EMBASE, ASSIA, and Global Index Medicus for studies published between 1 January 2020 and 27 July 2020. No language restrictions were applied, and non-English publications were translated. Search terms used included “coronavirus”, “covid-19”, AND “Incubation.” The database search was supplemented by screening the references of retrieved articles. Duplicates were removed using EndNote and a further check for duplicates was conducted manually.

Results: A total of 1,084 articles were identified from the databases and 1 article was identified through the reference screening of retrieved articles. Duplicates were removed (n= 227) and 858 articles were screened based on abstract and title. After the screening 689 articles were excluded and the remaining 169 articles were assessed for eligibility. The total number of full-text articles excluded with reasons was 105. Finally, 64 articles were included in the scoping review. The studies combined had a sample of 44,726. The averaged minimum and maximum incubation period were 2.59 and 14.78 days, the median was 6.51 and the mean was 7.18 days.

Discussion: This study provides a scoping review and meta-analysis of the global incubation period which can help inform the planning of self-isolation periods for suspected cases of COVID-19. The findings will also inform estimates of the parameters of incubation period distribution and back-projection models of the hidden prevalence of the asymptomatic population of COVID-19 cases in Ireland.

Implications: Currently the ECDC and national governments are planning their strategies on a maximum incubation period of 14 days. Our results confirm this but also highlight the variabilities found and the potential for further spread. There is a need for continued planning on the ongoing timing of school closures, social isolation and related measures.

Parallel workshop 2 – Health related behavior and physical activity

Chair: TBC

Abstracts

1. The effect of COVID-19 lockdown on health-related behaviours in UK adults

Authors - Mark A Tully, Anita Yakkundi, Jason J Wilson, Nicola Armstrong, Lee Smith

Professor Mark Tully, Ulster University

Background: On 23rd March 2020, the UK government introduced lockdown to reduce the transmission of the SARS-CoV-2 virus. Though necessary to prevent the spread of COVID-19, the impact on lifestyles was unknown. The aim of this project was to assess changes in health-related behaviours from before to during lockdown, and the relationship between these changes and mental health and wellbeing.

Methods: An online survey was administered to UK adults. Participants reported the amount of physical activity, screen time, fat intake (DINE questionnaire) and changes in alcohol consumption before and during lockdown. Mental health was measured using the 21-item Becks Anxiety and Depression Inventories. Differences in the sample characteristics by each health behaviour were tested with chi-squared tests or analysis of variance tests. The association between behaviours and mental health was studied using logistic regression models.

Results: 902 adults were included in this study (63.8% female and 50.1% aged 35–64 years). Overall, physical activity and screen time increased. Participants aged ≥ 65 years, married/in a domestic partnership and unemployed reported higher levels of physical activity during lockdown. Higher screen time (≥ 6 hours/day) was observed in participants aged 18–34 years, single, employed, had a high annual income ($\geq \text{£}60,000$) and current smokers. The 17% of participants reported increasing alcohol consumption were younger and had poorer mental health. Fat intake reportedly decreased in 47.3% of the sample compared to 41.3% who reported increasing their fat intake. After adjusting for socio-demographic covariates, there was a negative association between moderate-to-vigorous physical activity (OR = 0.88, 95% CI = 0.80–0.97) and a positive association between screen time (OR=1.07, 95% CI=1.02–1.13) and alcohol consumption (OR=1.64; 95% CI=1.01, 2.66) with poor mental health. Additionally, females, younger age groups, those with a lower annual income, current smokers and those with physical multimorbidity were associated with higher levels of poor mental health.

Discussion: Lockdown had an unintended impact on health-related behaviours and mental health. Some positive observations were an increase in physical activity, possibly related to increased leisure time and the government advocating daily outdoor exercise. The increased alcohol consumption is concerning, as are the negative impacts on the mental health of females, young people, those with lower incomes and existing health conditions.

Implications: In future lockdowns, plans are needed to promote health-related behaviours for both physical and mental health benefits, especially in young people and those of lower socio-economic position.

2. The benefits of physical activity and the consequences of physical inactivity in older adults

Authors - Conor Cunningham, Roger O’Sullivan, Mark Tully

Dr Conor Cunningham, The Institute of Public Health

Background: Physical inactivity is recognised as one of the leading risk factors for overweight, obesity, non-communicable diseases and chronic conditions.

Older adults are at a particular risk of leading inactive lifestyles.

In Ireland, 55% of older adults aged 65-74 years (and 37% aged 75 years or over) report taking part in sufficient physical activity to meet established guidelines for health.

In Northern Ireland 41% of older adults aged 65-74 years (and 10% aged 75 years or over) meet the physical

activity guidelines of 150 minutes of moderate activity, 75 minutes per week of vigorous activity or an equivalent combination of the two.

Methods: This presentation is based on research (Cunningham et al 2020) that aims to provide a comprehensive and systematic overview of the evidence of the specific consequences of physical inactivity on physical and mental health outcomes in older adults. Multiple databases were searched for published reviews of studies that assessed the relationship between physical activity and health in adults aged 60 years or older.

Results: Twenty-four systematic reviews and meta-analyses were included. Findings of the review highlight that physically active older adults benefit from reduced risks of early death, breast and prostate cancer, fractures, recurrent falls, functional limitations, cognitive decline, dementia, Alzheimer's disease, and depression. In addition, physically active older adults experience healthier ageing trajectories, better QoL, and improved cognitive functioning (Cunningham et al 2020).

Discussion: The findings highlighted in the Cunningham et al (2020) review provide compelling evidence of positive associations between physical activity and lower rates of morbidity and mortality in older adults.

Implications: Physical activity plays a key role in healthy ageing across the life cycle but especially in later years in the management of one's health and well-being.

The goal of public health is to decrease the time spent in ill health as people age and ensure that an increase in life expectancy is also an increase in lifetime spent in good health.

Given the wide range of benefits, finding ways to support older adults to maintain their physical activity during the COVID-19 pandemic is essential.

Parallel workshop 3 – Understanding the impact of COVID-19

Chair: TBC

Abstracts

1. Investigating the impact of COVID-19 on Caregivers for those with a rare disease

Authors - Julie McMullan, Ashleen Crowe, Olinda Santin, Stephen Quinn, Charlene McShane, Lesley Anderson, AJ McKnight on behalf of the IMPaCCT collaborative team

Julie McMullan, Queen's University Belfast

Background: Rare diseases are defined by the European Union as those affecting fewer than 1 in 2,000 individuals, cumulatively affecting 1 in every 17 persons at some point in their lives. Caring for someone with a rare disease, both formally and informally, can be an extremely demanding role requiring intense and unique care tailored to each individual's specific needs. In this qualitative study the impact of the coronavirus pandemic on rare disease caregivers was sought via an online survey. This survey forms part of a larger study (IMPaCCT), which aims to Investigate the iMPact of COVID-19 on Caregivers and patientTs.

Methods: Respondents (n=165) were recruited by distributing a survey (SurveyMonkey) through social media platforms online, on the QUB team website and by requesting that relevant charitable organisations publicise the study. After completing the introductory questions, caregivers were directed to a survey of 13 questions asking about the impact of the coronavirus pandemic on their caregiving responsibilities. The qualitative survey data was extracted from Survey Monkey platform and was thematically analysed.

Results: Several key themes were identified including the impact on caregiver's mental health. Several caregivers reported living with intense feelings of fear, anxiousness and worry. Caregivers mentioned their concerns about the potential implications for the patient if they had to be admitted to hospital. Ultimately caregivers were worried that the person they care for would not survive if they contracted COVID19. For many the burden in relation to caregiving had greatly increased during the pandemic and they highlighted the urgent need for support.

Discussion: The impact of caring for someone with a rare disease can be seen in many areas of an individual's life including psychologically, economically, physically and logistically. During the pandemic, this impact has intensified. There is an overwhelming sense that this cohort requires tailored support and respite to enable them to carry out their caring duties. Better communication is essential to combat confusion and to help this group to feel valued.

Implications: This study has identified that there is a need for tailored support for caregivers of those with a rare disease during the pandemic. It is vital that this group is not overlooked and that they are given the support they need to carry out this crucial role. This also has implications for respite and support services who should be encouraged to make contact with caregivers, to help them navigate these difficult times.

2. Knowledge Management Cell Learning Community - Learning from COVID-19

Authors - Grainne Cushley, Briega Quinn and Colette Rogers

Mrs Grainne Cushley, Public Health Agency

Background: The PHA, HSCB and BSO, under the direction of the Knowledge Management Cell, established a 'Learning Community' to facilitate organisational learning across the organisations in relation to learning from the response to COVID-19.

Methods: Supported by a researcher from QUB School of Public Health, the team developed a questionnaire which was formulated using evidence of good practice from other regions. The survey was distributed to senior staff in the three organisations and requested that the survey be completed within teams. Fifty four survey forms were returned from 15 of the 22 directorates and represented approx. 700 staff. The survey generated over 2500 lines of text which were analysed using qualitative content analysis methodology.

Results: The analysis generated seven key themes based on the salience (categories most frequently used in the response to one or more question) and relevance (issues addressed by at least half of the Teams who completed a questionnaire). These seven themes represent over 1450 (60%) of statements and are important to all three organisations and it was clear that the themes are closely linked. These included:

- Changed activity
- Communication
- Organisational
- Meetings
- Team Working
- Technology
- Working Remotely

Discussion: A number of recommendations were developed under 3 specific themes, based on the results.

Communication

- Developing an organisational chart that includes core roles and responsibilities and an up to date directory of skills relating to staff.
- Developing a robust technical infrastructure which enables better connection across the HSC system and its partners should be developed

Working arrangements

- The development of policies regarding new working arrangements including:
 - i. A safe working environment
 - ii. Flexible working arrangements
 - iii. Equitable distribution of workload and arrangements for leave
 - iv. Promoting Health and well-being and overcoming isolation
 - v. Systems for personal reflection and organisational learning

Organisational

- Providing effective technology, support and equipment for staff in all workplaces
- Reviewing emergency preparedness structures, including training, to enable a faster and more efficient activation of the Emergency Response across the organisations.
- Exploring how staff from the three organisations can be designated as 'key workers' to enable appropriate support for child care, schooling and caring responsibilities.
- Consideration to maintaining new processes and teams where they have ongoing relevance to future

business.

- Establish and agree action plans for taking forward the recommendations outlined within this report.

Parallel workshop 4 – Community response

Chair: TBC

Abstracts

1. The effectiveness of cross-sector collaboration in addressing health inequality during the Covid-19 pandemic

Author - Erin Richardson

Erin Richardson, Developing Healthy Communities

Background: Developing Healthy Communities, a regional charity based in the North West, investigated the views of community and voluntary sector workers on:

- the DoH COVID-19 Mental Health Response Action Plan
- their experiences of the impact of COVID-19
- emerging issues in their communities and how these can be addressed.

This was the first such study in NI, the first to bring the C&V and statutory sectors together to discuss learning from the response, and unique in including so many organisations from the west of the region.

Methods:

- Survey of 146 C&V organisations
 - Online seminar to launch report on survey findings:
- 74 participants from C&V and statutory sectors shared experiences, suggested next steps, and identified what is needed to make those happen Seminar run as partnership between DHC, Derry Strabane Healthy Cities, Derry Strabane District Council, Public Health Agency and Western Health and Social Care Trust.

Results:

- The pandemic deepened existing health inequalities, especially isolation, mental health and addiction.
- Evidenced value of C&V sector's rapid, effective and creative response, and speed/scale of co-ordinated/collaborative response between statutory and C&V sectors

Discussion:

- Three main themes emerged in response to the public health challenges presented:

1. Importance of Connection:

Build on best of partnership response, don't return to silos

Build equal and inclusive cross sector partnerships at all levels

Resource C&V sector so it can keep reaching the most vulnerable and isolated

Value the benefits of better connection between families and communities, particularly in informal care.

2. Our Shared Humanity:

Shared experience of pandemic transcends roles, expertise or status.

Highlights value of holistic approach focusing on kindness, compassion and hope

The virus doesn't discriminate, so everyone needs to be supported.

3. Leadership Role:

Ensure messaging is consistent, maximise impact of resources, avoid duplication, find creative solutions

Importance of creating time and space for sectors to come together and reflect on recent learning, scale of what has been achieved and challenges still to come.

Implications:

Harness increased understanding of factors affecting mental health/emotional wellbeing and address stigma

Ensure services are sustained throughout ongoing pandemic

Provide clear and consistent messaging as we move out of lockdown, particularly to support safety of those at risk or returning to work

Address technological exclusion, provide resources, and upskill those at a disadvantage.

2. A Community Response to Covid19

Author - Catriona Gallen

Ms Danielle Keenan, SPRING Social Prescribing

Background: The evidence supporting a community-health led approach to tackling social isolation through Social Prescribing during Covid 19.

Background: SPRING Social Prescribing helps people to address their health and wellbeing by connecting them to sources of practical, emotional and social supports within their community. Social Prescribers are based in Healthy Living Centres across the five Trust areas and worked with GP's, MDTs and the Covid Response teams during COVID 19, supporting people living in socially deprived areas. In March 2020 when lockdown measures were put in place, SPRING Social Prescribing launched the Connect Well service to ensure people stayed "connected" and supported throughout the pandemic. The Connect Well Service supported 1,895 people in Northern Ireland and Scotland from March to July. Social Prescribers recorded 15,244 communications, via phone, text, email and video call to people who were socially isolated.

Methods: Social Prescribers responded quickly to the changing needs of the community. Social Prescribers recorded clients' needs, the number of clients contacted, the number of new referrals and the number of interventions provided. The interventions recorded were:

- Community interventions
- Pharmacy
- Emergency services
- Food Deliveries
- Financial support
- Emotional Support
- Online Support
- Isolation Packs
- CBT/counselling
- Other

Results: During the first five months of COVID-19; 1,895 people were supported, availing of 8,436 interventions.

Community or practical interventions accounted for 29% of social prescribing needs, 22.6 % of people sought emotional supports, 19.5 % of people availed of online supports and connections and 11.2% of people were provided with isolation packs delivered to clients' doors. 7.3% needed help with food deliveries and 7.2% needed help with other services. Community interventions and emotional supports account for 51.6% of all social prescribing interventions.

2,290 people (pre and during Covid) were referred to SPRING Social Prescribing since January 2019- August 2020. 741 of those referred completed the Warwick Edinburgh Mental Wellbeing Scale; 85% showed an improvement in health and wellbeing.

Discussion: The psychological impact of social isolation during Covid-19 is evident in the marked increase in the number of clients seeking community and emotional supports. The results emphasise the importance of a community led approach through social prescribing to promote a sense of connection and community during a pandemic.

Implications: Social isolation creates heightened mental health and anxiety which has been evident in our findings, during Covid-19 lockdown measures. As the pandemic continues the role of the social prescriber in providing emotional, social and practical supports to people in lower socio-economic areas, is more important than ever to support people to better health and wellbeing.