

List of abstracts.

Day two – Thursday 17th November 2022

Title: The impact of Universal Free School Meal schemes on children's bodyweight outcomes.

Authors: Dr Angus Holford, B. Rabe

Summary

Since 2014, Universal Infant Free School Meals (UIFSM) have been made available to state-school pupils in the first three years of primary school in England. Holford and Rabe (2022) showed that exposure to UIFSM reduced obesity prevalence by 0.7%pt and mean BMI z-score by 0.041 by the end of Reception year. Cost-effectiveness of UIFSM for obesity-prevention depends on these effect sizes persisting. Here we exploit primary-age Universal Free School Meal (UFSM) schemes run in individual Local Authorities (LAs; Durham, Newham, Islington, Southwark, Tower Hamlets) to evaluate the effect on bodyweight outcomes to age 11, and how impacts vary with age at first exposure.

Methods and Findings

We worked with Policy Officers, Heads of Food Strategy and of Health Improvement in participating to define the timing, stated objectives, funding and provision model of their universal meal schemes. NHS Digital attached UFSM treatment variables to school-level data from the National Child Measurement Programme for academic years-ending 2007 to 2019 (N=166,103 school-years), and provided an anonymised 'small number suppressed' extract documenting the proportion of Reception children and Year 6 children measured who are overweight or obese, and the mean BMI z-score, against UK 1990 Growth Tables population thresholds, and the proportion measured who are female, and of Black ethnicity. The data are linked to banded indicators of school-level deprivation (quintiles of Income Deprivation Affecting Children Index and eligibility for means-tested Free School Meals). We use these data to estimate difference-in-difference models, comparing the change in bodyweight outcomes of children in LAs providing UFSM (treated) with a weighted average of those never providing UFSM (control).

We show that UFSM reduced obesity prevalence by 1.3%pt and mean BMI z-score by 0.049 among Reception children; and 1.4%pt and 0.026 among Year 6 children on average; but 2.1%pt and by 0.071 among Year 6 children exposed to Universal FSM since they started primary school.

An auxiliary analysis, using the same method on the UK Household Longitudinal Study (N=46,768) shows UFSM reduced monthly household food expenditure by £37.04 in a family of four, approximately half of which is attributed to eating out (which includes takeaways).

Conclusions

Providing Free School Meals at lunchtime on a universal basis reduced obesity prevalence and average BMI among Reception and Year 6 children. The benefit is greater the younger the child first receives it. This is likely to occur through (i) shifting from packed lunches to school meals, which have lower calorie content and are more nutritionally balanced (Evans et al., 2020); (ii) reduced expenditure on eating out, also typically nutritionally unbalanced and

calorie-dense; (iii) increased total consumption of food by, suggesting UFSM is enabling children to consume a greater variety of foods at home as well as school.

Title: Evaluation of the national rollout of the NHS Enhanced Service Incentive for weight management in primary care.

Authors: Professor Paul Aveyard, P. Seeber, S. Jebb, A. Hajizadeh, L. Heath, R. Stevens, M. Fagg, J. Valabhji, A. Adamson, M. Fong, C. Rothwell, L. McSweeney, G. Pilkington, H. Van Marwijk, K. Jolly

Summary

The aim of this evaluation is to examine the implementation of a national enhanced service incentive scheme for weight management, the process and mechanisms through which the interventions are expected to work, the outcome of NHS England's rollout and its impact on health equality and early markers of disease risk, and model long-term impact on health and costs.

Title: Mixed-methods study to generate evidence to inform weight management interventions in adult secure care mental health inpatient settings.

Author: Dr Susanna Mills

Summary

Excess weight and associated morbidity and mortality are major challenges for patients with severe mental illness (including schizophrenia and bipolar disorder) and learning disability. Unhealthy weight is particularly prevalent in secure mental health care (patients who have committed a crime or have threatening behaviour), where approximately 80% of service users are affected. Multiple factors generate a potentially obesogenic environment, including antipsychotic medication leading to weight gain, calorie-dense food provision, sedentary lifestyle, low patient motivation and often limited understanding of health promotion amongst staff. In response to this challenge, a development group was established, including former service users, carers, multidisciplinary staff and academia, to draw up a project proposal.

Our project competed successfully for external funding from the Academy of Medical Sciences. We are now using mixed-methods and stakeholder engagement to generate a novel evidence base. This will inform future co-development, implementation and evaluation of a weight management intervention for trialling amongst patients and staff in adult secure care mental health inpatient settings. The specific project objectives are to identify priority areas for weight management intervention and potential barriers and facilitators, and to triangulate research findings to inform future interventions.

The work involves four integrated workstreams, delivered across the North East Provider Collaborative. It is overseen by a steering group including representation from multidisciplinary staff, former service users, academia and a third sector charitable organisation, North East Together. In the first workstream, an electronic survey was delivered to all staff in secure services at Cumbria, Northumberland, Tyne & Wear NHS Foundation Trust (CNTW) over seven weeks in spring 2022.

A total of 79 responses were received, broadly representative of the service team, providing rich detailed insights around weight management challenges and opportunities. Framework analysis of the findings subsequently informed the second workstream, which involves ethnographic observations of food and exercise behaviours on an inpatient low secure mental health ward. Observations are currently underway during April – September 2022 and encompass wide-ranging events such as mealtimes, occupational therapy cooking sessions, weekly takeaways, football club, gym visits, social events and patient leave trips. Emergent themes will then be explored further through focus groups and semi-structured interviews in workstream three.

Separate focus groups are planned in CNTW secure care with service users, a range of multidisciplinary staff, carers and former service users. Semi-structured interviews are planned at Tees, Esk and Wear Valleys NHS Foundation Trust (TEWV) secure services with a range of multidisciplinary staff, to explore complementary and contrasting views and issues in a second secure mental health setting. Finally, the insights from workstreams one to three will be integrated using triangulation in workstream four.

A working group with participation from secure services, public health, former service users and academia will employ Triangulation Protocol to identify areas of agreement and divergence between the workstreams. This will inform a comprehensive evidence summary. In future, our empirical findings will be assimilated with reviews of existing research and previous successful initiatives, to inform co-development of a weight management intervention for extensive implementation across secure care services.

Title: "It's like a shining light": Prioritising patient perspectives on England's first Heroin Assisted Treatment (HAT) programme.

Authors: Professor Tammi Walker and Ms Fleur Riley.

Summary

Heroin Assisted Treatment (HAT) is an enhanced harm reduction programme designed for treatment-resistant individuals who inject drugs, involving twice daily supervised injections of medical-grade heroin (diamorphine). The first HAT service in England was established in 2019. International research has produced promising evidence for HAT in reducing a range of intravenous drug related harms and promoting social benefits such as improved wellbeing and reduced criminal activity.

HAT is a high-intensity treatment which operates under strict clinical conditions. Highly restrictive drug treatment programmes have been identified as mechanisms of social control, limiting the autonomy of marginalised or 'deviant' populations based in blanket mistrust of people who use drugs. The impact of control and trust on HAT patient experiences is unknown. Furthermore, there is a dearth qualitative literature that privileges HAT patient's own perspectives.

To address this, we conducted semi-structured interviews with past and current HAT patients in a North-East England drug service (N=12). Data was subjected to thematic analysis, with common themes emerging inductively from the data. Findings showed that formal control, informal control, trust and mistrust served to both limit and enhance patient autonomy in divergent ways. Mandatory methadone consumption and mistrust of

institutional control impacted the desirability of HAT. Diamorphine provision enhanced patients' financial, social and personal autonomy, and patients exercised further autonomy through medication self-management. Twice daily supervised injecting reduced risks associated with street heroin consumption, but restricted patient's freedom, opportunities, and potential to achieve their goals.

It is argued that, despite many positive outcomes for HAT patients, the formal constraints placed upon diamorphine prescribing restrict patient autonomy and limit opportunities for trust-building. More trust and less control may liberate patients from restrictive formal constraints, broadening HAT accessibility, and ultimately enabling patients to live more authentic and fulfilling lives.

Title: Effectiveness of NHS-based Multi-tiered Lifestyle Interventions to Achieve Type 2 Diabetes Prevention Across Glycaemic Risk Tiers.

Authors: Professor Edward Gregg, S. Mehar, E. Redman

Summary

A Service Evaluation of NHS-based lifestyle intervention programmes in North West London and Leicester, determining the barriers and facilitators of referrals, participation, adherence, and effectiveness of the following NHS-based lifestyle intervention programmes:

1. **REWIND** *low-calorie diets and total dietary replacement, comparing the effectiveness amongst adults with type 2 diabetes.*
2. **NDPP** *and locally recognised weight loss programme for prevention of Type 2 Diabetes and NDH*
3. **Baby steps** - *A digital application for Gestational Diabetes in South Asian Women*

Through the evaluation, we aim to identify the rates and race/ethnic inequalities in the incidence of referral for Non-Diabetic Hyperglycaemia, remission among adults with type 2 diabetes and engagement with women from the South Asian community with GDM. Assessing the impact of the programmes on patient experience, dietary changes, biomarkers (e.g., Weight, HbA1c, and Blood Pressure), quality of life (QoL), and physical activity levels.

Title: Understanding the association between restricted activity and patient outcomes in older patients: a systematic review and meta-analysis

Author: Ms Ishbel Henderson

Summary

Typically, research and guidelines focus on individual diseases resulting in fragmented care. This creates a higher burden for patients through logistical problems attending different appointments and adverse effects accompanying polypharmacy. Not only is the patient's quality of life impacted, but there are significant economic burdens associated with following multiple single condition models to treat MLTCs.

Patients with MLTCs often display general, non-specific symptoms, which makes it difficult to identify problems. Evidence indicates using a general health measure, alongside typical

measures, could more effectively identify deterioration. Restricted activity can be hypothesised to manifest earlier than the routinely used clinical markers. If true, this could offer a new measure for monitoring patients with MLTC.

Restricted activity is commonly observed in older adults; however, little is known about its clinical significance. There is no universal definition, and therefore no accepted method of measuring it. It is widely recognised that exercise is a crucial part of rehabilitation. Limited studies have looked at a reduction in activity, leading to a decline in health.

The aim of this work is to understand the prognostic significance of restricted activity among older adults, in terms of hospitalisation, functional decline, and mortality. The secondary aim is to investigate the measures used and evaluate whether these might be appropriate for disease monitoring. This is part of a wider project aimed at designing an intervention to identify elderly patients at risk of declining health.

Methods

The search was conducted in five databases: MEDLINE (via Ovid), Embase (via Ovid), Science Citation Index & Social Science Citation Index (Web of Science), CINAHL (EBSCOHost), and ASSIA (Proquest). No language or time limits were applied.

The PECOS framework followed was developed with the help of PPI:

Population: Older adults, above an average (mean or median) age of 65+ years old.

Exposure: Restricted Activities of daily living

Control: No restricted Activities of daily living

Outcome: patient outcomes (functional decline (eg cognitive decline), hospitalisation & mortality)

Study design: quantitative studies

Results

After thorough literature searching and title-abstract screening, the meta-analysis is planned to be completed by September. The initial search captured 9,181 papers, with 8,433 after de-duplication. After title-abstract screening by two independent researchers, 89 full-text papers will be reviewed, and appropriate papers will be taken forward for data extraction and subsequent analysis.

Conclusions

This evaluation of restricted activity will act as the basis for further research to determine the most appropriate methods of measuring, delivering, and implementing the findings as an early warning signal intervention. Careful consideration will be taken when evaluating supporting technologies to reduce any digital exclusion in an already vulnerable group.

The ultimate objective is to assess changes in activity, incorporated into an early warning system with earlier interventions for patients with MLTCs. Additionally, this will also endeavour to provide a more sensitive outcome for future studies, such as deprescribing. This research will strive to enhance independence for the frail elderly, with improved medical outcomes, whilst reducing the burden on healthcare systems.

Title: Promoting family preservation for children at the edge of care: A realist evaluation.

Authors: Dr Sam Redgate, D. Smart, S. Barrett, C. Barron, S. Burns, H. Frost, W. McGovern, V. Peart, E. Adams, H. Alderson, E. Kaner, R. McGovern

Summary

Children in care are amongst the most disadvantaged in society. There were over 80,000 children in care, in England during 2021, with the North East of England being above the national average (Department of Education, 2021). Whilst children are taken into care due to risk posed to them, the experience of being in care is recognised as contributing to wider adverse experiences affecting mental health and educational achievement for example. Longitudinal data suggests the problems children in care experience persist into adulthood, perpetuating 'a continuing legacy of adversity' (Cameron et al., 2018). Consequently, providing effective interventions to prevent care entry is important in addressing inequalities experienced by this population.

Edge of care services are targeted interventions to support families to reduce the likelihood of children being taken into care, by working with families at a time when care is actively being considered by children's social care. Edge of care services intervene to avoid care entry through affecting change in adolescent and/or parental behaviour. Emerging literature shows that edge of care interventions can bring about benefits. However, it is not clear how or why these interventions work, or circumstances when they do not. It is important to further this understanding to inform development of effective, theory-informed practice to benefit this population. Our research exposes mechanisms by which edge of care interventions can reduce the likelihood of children going into care, informed by wider literature and a case study-based intervention evaluation.

The research has been developed with practice partners from an edge of care service, Keeping Families Connected, in North Tyneside, Northeast England (the case study site). Phase 1 of the research focused on developing initial programme theories pertaining to how edge of care services work and outcomes achieved in stated contexts. A realist literature synthesis, informed by advisory group engagement and subject expertise within the research team, was undertaken. This synthesis culminated in four programme theories describing effective edge of care service operation. These theories identified the need for family skills training, home-based service delivery, dedicated worker input and rapid response to need.

Phase 2 of the research, a realist evaluation of Keeping Families Connected, is currently in progress. The evaluation includes observations of practitioner meetings to formulate or review support, review of referral and assessment documents, analysis of routine data collected by the local authority, alongside interviews with staff and families who have accessed the service. We will present the evaluation findings, which examine whether Keeping Families Connected intervention works, as well as what it is about the intervention that works, for whom, in what circumstances and why. We will present our programme theories relating to mechanisms of voluntary engagement, demonstrating care, and family skills training, to prevent care entry in families at the edge of care.

Title: Assessing the feasibility and acceptability of an interactive film-based intervention on resilience, mental wellbeing and help-seeking attitudes in young people (aged 14-18) at school settings in North Cumbria and the North East of England: preliminary findings of a mixed-methods cluster randomised controlled feasibility trial.

Authors: Ms Emma Walker, H. Corlett, L. Azevedo, B. Arnott, E. Soulsby, K. Franks, C. Hardacre, J. Ling, F. Christie-de Jong

Summary

Adolescence is a period of heightened vulnerability for the onset of mental illness and 75% of all mental health problems are established before 18 years old (1,2). Interventions aimed at building resilience have been shown to prevent mental illness in young people, improve wellbeing, reduce risk factors, increase help-seeking behaviours and reduce health inequalities (3–5). Schools are a key setting for building resilience, playing an important role in ameliorating some of the well-established negative effects of poverty and family difficulties on young people. Schools would welcome effective ways to deliver interventions aimed at building resilience, enhance wellbeing, and improve help-seeking behaviour at scale and with low resource requirements. Interactive films potentially offer an accessible and cost-effective preventative tool, but there is lack of evidence evaluating effectiveness of such interventions (6). This feasibility trial presents the first step in establishing the evidence base for this preventative tool.

Intervention

The North East and North Cumbria Child Health and Wellbeing Network, in collaboration with William Howard School, worked with local filmmakers TryLife to create an interactive film for young people focusing on issues relevant to young people, including teenage pregnancy, mental health, building resilience and help-seeking attitudes. TryLife's digital educational films use a young person focused co-production approach to public health concerns, grounded in the notion of building young people's capabilities.

Methods

This is a mixed-methods feasibility trial, to evaluate the acceptability and feasibility of a randomised controlled trial of the interactive film intervention aimed to build resilience, enhance mental wellbeing and help-seeking attitudes for young people (14-18) in school settings in the North East and North Cumbria. Three schools were recruited and randomised to condition 1) watching the film in class 2) watching the film in class supported by youth workers or 3) class as usual without watching the film, as a control condition. Between November 2021 and September 2022, 175 students completed surveys about mental wellbeing, help-seeking and resilience before watching the film, and at 3- and 6-month follow-ups. Qualitative data were collected through focus groups with students and interviews with teachers and youth workers.

Findings

Initial evaluation of the process of the trial suggests there is no 'one-size fits all', with mixed experiences at schools. Many aspects worked well, such as data collection and analysis, ease of use of showing the film, and enthusiasm for the film and project from participants. There were also challenges to be remedied before beginning a larger-scale trial such as initial school

recruitment and engagement, and resource issues within schools. Preliminary data analysis suggests that pupils and teachers supported using the film as an intervention in schools.

Title: Evaluating models of health-based Independent Domestic Violence Advisor (IDVA) provision within a maternity setting.

Author: Dr Kylee Trevillion

Summary

Healthcare-based Independent Domestic Violence Advisors (IDVAs) provide practical/emotional support to people experiencing domestic abuse, and training to healthcare staff. IDVA programmes are found to be effective, but less is known about their implementation or impact within maternity services. The RIVA study comprises three projects:

- i) Survey of English NHS Trusts with maternity services, to identify IDVA programmes
- ii) World café to generate recommendations for the successful implementation of IDVA programmes in maternity services
- iii) Case-study of the implementation of IDVA models across three NHS Trusts, including measurement of the impact of a DVA third-sector organisation supporting Trusts' IDVA programme implementation.

Title: Supporting the NHS Long Term Plan: An evaluation of the implementation and impact of NHS-funded tobacco dependence Services.

Authors: Dr Ryc Aquino, Dr Kerry Brennan-Tovey, A. Wearn, T. Bigirimurame, N. Bhattarai, T. Robinson, S. Ramsay and E. Kaner, on behalf of the NHS TDS evaluation team

Summary

This mixed-methods evaluation aims to investigate how this policy is delivered in practice (i.e., interviews, surveys, document analysis) and its impact on health and care outcomes (i.e., analysis of routinely collected data). Findings from this evaluation will support service delivery across England by identifying implementation issues and developing practical recommendations for service improvement from the perspectives of service users and healthcare professionals.

Title: Equitable prevention: implementing a targeted universalism, paediatric oral health promotion programme in a hospital setting.

Authors: Dr Grazia Antonacci, L. Ahmed, L. Lennox, S. Coronini-Cronberg

Summary

Tooth extraction is the most common reason for hospital admission of children aged 5-9 years in England, costing the NHS £33 million annually. Tooth decay is almost entirely

preventable and is inequitably distributed across the population. It can cause pain, infections, sleepless nights, school absences, and undermine overall health status.

Three in 10 young children in Chelsea and Westminster Hospital NHS Foundation Trust's (CWFT) catchment area have signs of visible tooth decay, compared to 1 in 4 nationally. A three-year (2019-2021), multi-partner (CWFT; Local Authority-LA; Public Health England-PHE) oral health programme (OHP), was commissioned and delivered using a targeted universalism approach to provide health improvement information and relevant signposting of paediatric patients through:

(i) Universal health promotion activities (HPA), including: animated videos playing in waiting areas; poster displays; bedside information; discharge information packs;

(ii) Evidence-based targeted supervised toothbrushing (STB), individual bedside sessions for paediatric inpatients and carers including: sugar intake information;

(iii) Tailored oral health (OH) staff training.

Methods

One quantitative key performance indicator (KPI1-Percentage of children/families seeing promotional material; KPI2-Number of children receiving STB; KPI3-Number of staff trained), was identified for each intervention-type. STB survey, online booking and training feedback data were analysed using Statistical Process Control charts, summary statistics or thematic analysis.

Results

93 posters were deployed across the hospital site (A&E, paediatric, maternity), along with animated videos (A&E, outpatients). Overall, 41% (233/565) of families recalled seeing OHP materials across the hospital site,(KPI1) though those identifying as Asian or Asian British ethnicity were least likely to report this (29.3%) compared to those of White or White British ethnicity (46.0%).

STB was impacted by COVID-19, with no delivery for 3 months due to Infection Prevention Control protocols. Between November 2019-August 2021, 737 children received STB,(KPI2) averaging 35 children/month during the active project phases. OHP reach is estimated to increase by 943 children considering siblings. Following STB, 96% children/carers stated they learned something, and 94% committed to behaviour change.

57% of children receiving STB identified as belonging to a minority ethnic group, compared to 39% seen in the Trust catchment population. Those identifying as 'Black or Mixed ethnicity' were more likely to receive oral hygiene products, compared to those of White ethnicity (56.7% vs. 42.4%). All children (n=173) for whom signposting to dental services was indicated, were signposted.

73 staff members,(KPI3) including doctors, nurses, midwives, Allied Health Professionals, received training.

Of those providing feedback (n=32), the majority 84%(n=27) reported learning something new, and what they would do differently.

Conclusions

Through working in partnership with LA and PHE, results demonstrate that a hospital-based OHP is potentially an effective and equitable way to improve patient, family and staff knowledge of good OH practices and encourages participants to consider positive behaviour change. Implementation of an OHP in a “non-traditional” health promotion and prevention setting reached 1,680 children and families who are most at risk of not being able to access dental health services. This work was shortlisted for HSJ value award 2021 in the category ‘public and preventative health service redesign initiative’.

Title: A mixed-methods evaluation of cross-regional workplace health initiatives including a cluster randomised controlled trial (cRCT) of a behaviour change intervention.

Authors: Dr Laura Kudrna, A. Lake, C. O’Malley, F. Hillier-Brown, C. Rothwell, M. Fong, A. El-Osta, I. Webber, A. Alaa, B. Hayhoe, D. Nichols, R. Powell, K. Asanati, A. Majeed, K. Jolly, R. Lilford, L. Alidu, J. Yates, J. Jones, N. Campbell, C. Gay, L. Al-Khudairy, I. Bharatan, K. Schmidtke, G. Currie, A. Latuszynska

Summary

This research will generate and synthesise new knowledge about the effectiveness of workplace health initiatives across regions. North East and North Cumbria colleagues will conduct a mixed methods research design about the mechanisms of how workplace health initiatives change health and business outcomes (including wider context-level). Northwest London colleagues will conduct mixed methods research about how employers support their staff in identifying and addressing barriers and facilitators to adopting health-seeking self-care behaviours in the workplace (focussed on employer-level). West Midlands colleagues will conduct a cluster randomised trial of a behavioural intervention on goal setting evaluated with mixed methods research (individual-level).