British Association of Perinatal Medicine and Neonatal Society

1102 RISK OF CONGENITAL DIAPHRAGMATIC HERNIA AT EARLY AND ADVANCED MATERNAL AGE: RESULTS FROM A POPULATION-BASED COHORT STUDY IN ENGLAND

¹Maria Peppas, ¹Bianca De Stavola, ²Stavros Loukogeorgakis, ¹Ruth Gilbert, ²Paolo De Coppi. ¹Great Ormond Street Institute of Child Health; ²Great Ormond Street Hospital for Children NHS Foundation Trust

10.1136/archdischild-2021-rcpch.399

Background Despite advances in clinical management, congenital diaphragmatic hernia (CDH) is still associated with high rates of mortality and morbidity in the UK. Population-based studies examining the epidemiology of CDH in the UK are needed to understand which factors are associated with the condition and to inform preventative interventions. A major determinant of outcomes among infants with CDH is the presence of associated anomalies. Although maternal age is a known proxy of sociodemographic, behavioural and biological risk factors for adverse pregnancy outcomes, its relationship with CDH in the UK and how this might vary among those with additional anomalies is not known.

Objectives To examine the relationship between maternal age and CDH, including in the absence and presence of additional anomalies which may suggest syndromic conditions.

Methods We analysed all live-born singletons delivered in NHS England hospitals between 2002 and 2018. De-identified hospital admission and mortality data were searched up until the first birthday to identify infants with a CDH diagnosis, related repair or related death. CDH was further classified as isolated (no additional malformations) or complex (additional malformations beyond the digestive or respiratory systems). The association between maternal age (categorized as <20, 20–24, 25–29, 30–34 and ≥40 years) and any CDH, isolated CDH and complex CDH was estimated using logistic

regression that also included birth period, ethnicity, deprivation, and region of maternal residence at delivery.

Results We identified 2,289 infants with CDH among 7.7 million live-births (3.0/10,000 live-births; 95% CI, 2.8–3.1); 49% were complex cases. Maternal ages of 35–39 and ≥40 years were associated with a 17% and 36% increased risk of any CDH, respectively, compared to the reference age of 25–29 years. There was weak evidence of increased risk for mothers <20 years. Isolated CDH was not associated with any age group. The estimated risk of complex CDH was increased for mothers aged <20, 35–39 and ≥40 years, by 33%, 26% and 63%, respectively, compared to the reference age of 25–29 years.

Conclusions Early and advanced maternal age were associated with complex CDH even after adjustment for other demographic factors, but these associations were not replicated for isolated CDH. While further work is needed to understand the underlying mechanisms, this study suggests that maternal age could be a useful indicator of increased risk of complex CDH.

RCPCH Trainees Committee

1103 HIGH IMPACT, COST-EFFECTIVE HOC-BOX PROJECT SUPPORTING TRAINEE WELLBEING AND MORALE DURING THE COVID-19 PANDEMIC AT A TERTIARY CHILDREN'S HOSPITAL

Shoshana Layman, Esai Archary, Ruth Witcombe, Christine Haskins. Birmingham Women's and Children's NHS Foundation Trust

10.1136/archdischild-2021-rcpch.400

Background At the start of the COVID-19 pandemic, emergency rotas were introduced. Trainees were expected to work longer hours or a night shift at limited notice, creating further anxiety amongst trainees already at risk of low morale and burnout. Most doctors already believe that their wellbeing is not valued, and now trainees faced a tougher working environment.

Due to social distancing measures and government guidance, refreshment facilities in the hospital were closed and supermarkets were faced with panic-buying and restricted hours. Prior to the pandemic, an overwhelming majority of doctors missed meals (65%) or did not drink enough water at work (73.7%). But now, trainees were left without access to food or water, particularly out-of-hours.

The Hospital-on-Call Box (HOC-BOX) was created with the postgraduate team to provide free food, drinks and toiletries 24/7 to all trainees, to support them physically and mentally working the emergency rota during the pandemic.

Objectives The HOC-BOX was created to provide trainees with food, drink and other essentials, to boost morale, improve mental wellbeing and support all trainees who had on-call shifts during the COVID-19 pandemic.

Methods An 11-month project using plan-do-study-act (PDSA) cycles was completed. Following the launch of the boxes, they were promoted by the postgraduate team, who have had an integral part in supervising and restocking the boxes. Trainees

Abstract 1102 Table 1 Risk of CDH by maternal age after adjustment for other demographic factors

Maternal Age (Years)	Any (N=2,289)		Isolated (N=1,173)		Complex (N=1,116)	
	n	Risk ratio (95% CI)	n	Risk ratio (95% CI)	n	Risk ratio (95% CI)
<20	137	1.20 (0.99–1.45)	68	1.09 (0.84–1.43)	69	1.33 (1.02–1.73)
20–24	410	1.04 (0.92–1.18)	209	1.01 (0.85–1.20)	201	1.08 (0.90–1.29)
25–29	599	1.00 (Ref.)	312	1.00 (Ref.)	287	1.00 (Ref.)
30–34	650	1.05 (0.94–1.18)	342	1.04 (0.89–1.21)	308	1.06 (0.90–1.25)
35–39	391	1.17 (1.03–1.34)	197	1.10 (0.92–1.31)	194	1.26 (1.05–1.51)
≥40	102	1.36 (1.10–1.68)	45	1.12 (0.82–1.53)	57	1.63 (1.23–2.17)

were asked to provide quantitative and qualitative feedback about general use of the HOC-BOX and provide their opinions on if, and how the HOC-BOX project improved trainee wellbeing.

As with the changes in trainees over the last 11-months, all new trainees at the hospital have been informed about the HOC-BOX at hospital induction and trainees have been reminded to complete a survey at the time of using the box, about how it has affected their mental wellbeing at work.

Results Since its launch, we have spent 450 pence/day to replenish the boxes.

Feedback has been collected with a total of 163 responses.

All respondents feel more supported following the HOC-BOX introduction, with 93% stating it has exceeded their expectations. 92% of users believe their mental wellbeing has improved on both long days and night shifts. 96% of respondents strongly agree or agree that *'The HOC-BOX is important to staff wellbeing and morale'*. 92% of users want the project to continue after the COVID-19 pandemic.

Users reported that the HOC-BOX *'keeps trainees going during a busy shift,'* acts as a *'mood booster'* and *'brings the on-call team together.'* It is a *'brilliant initiative'* which *'lifts the spirits'* and makes trainees *'feel really supported and appreciated by the postgraduate/trainee team'*.

Conclusions The HOC-BOX has been the *'psychological PPE during COVID-19'* for many trainees. It has greatly improved staff morale, providing a *'virtual hug,'* through food, snacks and other essentials *'when nothing in the hospital is open'* and when *'supermarket queues are long.'* It has left trainees feeling *'looked after and appreciated.'* It has expanded to a second hospital site and many trainees *'look forward to its future expansion to other hospitals in the deanery'*.

British Association of Child and Adolescent Public Health

1104

THE IMPACT OF THE COVID-19 PANDEMIC AND ASSOCIATED CONTROL MEASURES ON UPTAKE OF PRE-SCHOOL IMMUNISATIONS IN SCOTLAND

¹Fiona McQuaid, ²Rachel Mulholland, ³Claire Cameron, ³Cheryl Gibbon, ⁴Aziz Sheikh, ⁵Judith Tait, ⁶Steve Turner, ⁵Jaime Villacampa Ortega, ⁷Rachael Wood. ¹University of Edinburgh/South East UK; ²University of Edinburgh; ³National Health Service Scotland, Public Health UK; ⁴Usher Institute, University of Edinburgh; ⁵Public Health UK; ⁶University of Aberdeen; ⁷Public Health Scotland and Centre for Brain Sciences, Centre for Population Health, University of Edinburgh

10.1136/archdischild-2021-rcpch.401

Background Maintaining high levels of immunisation uptake is vital to protect children from vaccine-preventable disease. The COVID-19 pandemic and measures taken to control it, including national lockdowns, threatened to disrupt routine immunisation programmes. Initial reports from the early weeks of lockdowns in the UK and worldwide suggested that preschool immunisation uptake was falling. In Scotland enhanced surveillance databases were set up to monitor and

Absatrcrt 1104 Table 1 Uptake of pre-school immunisations by time-period with odds ratio compared to baseline of 2019. LD = lockdown, NA = not applicable, statistically significant changes in uptake compared to 2019 are shaded green

Immunisation	Time period	% uptake within 4 weeks of eligibility	% point change from 2019	OR for uptake compared to 2019 (95%CI)
First6in1	2019	94	NA	NA
	LD	95.3	1.3	1.28 (1.18–1.39)
Second6in1	2019	84.8	0	NA
	LD	89.7	4.9	1.56 (1.47–1.65)
Third6in1	2019	73	NA	NA
	LD	82.1	9.1	1.7 (1.63–1.78)
FirstMMR	2019	65.2	NA	NA
	LD	78.4	13.2	1.94 (1.86–2.02)
SecondMMR	2019	51.8	NA	NA
	LD	66.1	14.3	1.8 (1.74–1.87)

rapidly assess the impact on childhood immunisation uptake rates.

Objectives This aim of this study was to evaluate the impact on timely childhood immunisation uptake (defined as within 4 weeks of becoming eligible for the immunisation according to the national immunisation schedule) before, during and after a national lockdown using data from the entire Scottish population.

Methods This was an observational study using routinely collected data in the year prior to the pandemic (2019), immediately before (January –22 March 2020), during (22 March–31 July 2020) and after (August–September 2020) the first period of the UK 'lockdown'. Data were obtained for Scotland from the Public Health Scotland 'COVID19 wider impacts on the health care system' dashboard (<https://scotland.shinyapps.io/phs-covid-wider-impact/>). Uptake of the three doses of DTaP/IPV/Hib/HepB vaccine in early infancy and two doses of MMR at age 12 months and 3 years 4 months was evaluated at the four time points. Timely uptake rates were compared using binary logistical regression analysis. Data were also analysed separately by geographical region and indices of deprivation.

Results Vaccination rates in Scotland for all the childhood immunisations rose during lockdown compared to the previous year (table 1). Significant increases in uptake were seen across all deprivation level, though there was evidence of greater improvement for the least deprived for the MMR immunisations.

Conclusions This study demonstrates that the national lockdown in Scotland has had a positive effect on timely pre-school immunisation uptake. This provides an excellent opportunity to explore the reasons behind this increase, whether this has been achieved through the removal of barriers, increased motivation or awareness campaigns including those co-ordinated by the Scottish Immunisation programme and sharing of best practice. Promoting immunisation uptake and addressing potential vaccine hesitancy is particularly important in the context of ongoing and repeated lockdown-style control measures and with future of a paediatric COVID-19 vaccination campaigns.