

death and lower the severity of injuries sustained in road traffic accidents.

**Objectives** The main objective of our study was to explore the knowledge, attitude and practice of parents of newborn babies regarding infant or child car restraints during their homeward trip from the hospital. The secondary aim was to evaluate the reasons behind non-compliance to infant and child car restraints amongst those who intended to travel home in a motor vehicle, and compare our findings with a systematic review of child car seat restraints.

**Methods** A 22-item self-administered questionnaire was completed by a convenience sampling of 200 parents of babies about to be discharged from a well-baby nursery in Singapore during the 4-month study period. Parents of babies who were admitted to the Neonatal Intensive Care Unit, transferred to other hospitals or passed on, along with unwell mothers, were excluded.

**Results** Out of 200 parents, 98.5% intended to bring their newborn baby home by a motor vehicle. Parental knowledge of the local legislation on child car restraints was generally high (74%), with the majority aware of the correct location (93.5%) and orientation inside the vehicle (72%). Although 106 parents were already in possession of a child car restraint, only 81 (76%) intended to use it for the homeward journey. The remaining chose not to because of a personal belief, misperception of risk and/or logistical difficulty. Ownership and usage of child car restraints was positively correlated with household income.

**Conclusions** The surveyed parents generally had a high level of knowledge regarding child car restraints. However, the misperception of need which led to inconsistent practice was worrying. A multi-faceted approach, including parental education and regulatory requirements, are important to increase compliance to child and infant car seat restraints in Singapore.

### 238 KNOWLEDGE, ATTITUDES AND PRACTICES TOWARDS BREASTFEEDING AMONGST PAEDIATRIC HEALTHCARE PROFESSIONALS

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**Background** The World Health Organisation recommends exclusive breastfeeding of infants for six months when complementary feeds are introduced whilst continuing breastfeeding for up to two years of age and beyond. Ongoing predictable support to breastfeeding mothers is essential to improve breastfeeding rates and paediatric hospital doctors and nurses have an opportunity to provide this support when breastfed infants are admitted to their wards.

**Objectives** This study aimed to assess the breastfeeding knowledge, attitudes, and practices amongst paediatric healthcare professionals in a large teaching hospital in the UK.

**Methods** We conducted a qualitative study through a self-administered online questionnaire. Participants were doctors, nurses, nursery nurses and student nurses working in the paediatric department at the time of the study. There were 32 respondents, 14 of these were doctors.

#### Results

- Emergent themes were identified and analysed across all interviews. Five themes emerged: Breastfeeding knowledge

and training, the influence of paediatric work experience, practitioner attitude towards breastfeeding, role in breastfeeding and practice in supporting breastfeeding.

- Almost all the participants had good levels of breastfeeding knowledge though only 50% of doctors had received formal breastfeeding training and were relying on personal experience whilst 70% of nurses had received training.
- All participants had a positive attitude towards breastfeeding with nurses mostly indicating comfort in the role of supporting mothers. A significant proportion of doctors indicated a lack of conviction in their ability to support breastfeeding mothers.
- Inconsistent advice would be offered to mothers about bottle feeding by different practitioners.

**Conclusions** 7 out of 14 doctors had no breastfeeding training and doctors were found to be less confident in the role of supporting breastfeeding mothers. There was good knowledge base amongst all the healthcare professionals however the actual practice of advice offered in supporting mothers was inconsistent amongst practitioners.

We hope that the results of this study will encourage formal breastfeeding education to be offered for all health care professionals working in paediatrics and the development of departmental breastfeeding policies to enable consistency whilst improving the care offered to patients and their families.

### 239 TRIAL PROFILE: COMMUNITY ENABLED READINESS FOR FIRST 1000-DAYS LEARNING ECOSYSTEM (CRADLE)

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**Background** The first 1000 days presents a unique opportunity to enhance a child's ability to grow, learn and thrive which will have a long term impact in a child's future.

**Objectives** The Community enabled ReAdiness for first 1000-Days Learning Ecosystem (CRADLE) is a trial designed to develop a self-learning eco-community from pregnancy to early-childhood to promote parenting self-efficacy (PSE) and improve health outcomes for first-time families. Here, we describe the trial protocol and provide updates thus far.

**Methods** CRADLE is a parallel, three-arm randomised controlled trial which targets to recruit 750 pregnant women from KK Women's and Children's Hospital (KKH), Singapore. Participants are randomly assigned to receive: (1) standard routine care; (2) behavioural nudges and engagement via a social media platform; or (3) midwife-led continuity care involving direct individual engagement with midwives throughout pregnancy, to 6-month post-delivery.

We hypothesize that the use of virtual targeted nudging tool in the form of text messages along with social media (arm 2), or face-to-face care from midwives supplemented with individualised teleconferencing sessions (arm 3) in the first 1000 days will lead to a better maternal PSE and health outcomes in both mother-child, compared with those who are receiving standard routine care (arm 1).

The primary outcome is PSE, while the secondary outcomes include birth experience, mental wellness, feeding practice and nutritional status of mother-child. Participants are followed-up

from recruitment visit (early-mid pregnancy) until child turns two years of age. Intention-to-treat and per-protocol analyses will be performed using general linear models to test the effects of interventions across three arms.

**Results** The trial was launched on 1 July 2020. As of 21 December 2020, a total of 60 participants were recruited with 2 of them withdrawn due to miscarriage. Currently, 14 participants have reached the postnatal stages. Participants' baseline socio-demographic characteristics were similar across three arms, with the mean age of 31 years old, and the mean gestation of 18.1 weeks, at the time of recruitment. In terms of ethnicity, majority of recruited patients were Chinese (71.7%), followed by Malay (8.3%), Others (11.7%) and Indian (8.3%). 90% of the participants were employed, and over 70% of the participants attained tertiary education qualifications.

**Conclusions** Despite recruitment delay of a few months due to COVID-19, the team was able to recruit 60 participants over 5 months with strict safe distancing measures. Multiple strategies have been established to facilitate the recruitment including extending publicity of the programme within and outside of KKH. The team will initiate preliminary data once 100 participants have been recruited. To engage existing participants, CRADLE will hold its first health education webinar in January 2021. This study may identify a sustainable strategy in the community by helping first-time parents to have a positive experience during the pregnancy, childbirth and parenthood, leading to enhanced PSE and health outcomes for both mother and child.

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#### PERCEPTION OF HONG KONG UNDERGRADUATES ON PERSONALIZED MEDICINE, PHARMACOGENOMICS AND GENETIC TESTING

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**Background** The global development and advancement of genomic medicine in the recent decade has accelerated the implementation of Personalized Medicine (PM), Pharmacogenomics (PG) and Genetic Testing (GT) into clinical practice. The rapid emergence of diverse genetic services has marked the global transition to the genomic era. Our study aims at investigating the perception of Hong Kong (HK) undergraduates on PM, PG and GT.

**Objectives** To investigate the perception of Hong Kong undergraduates on Personalized Medicine, Pharmacogenomics and Genetic Testing

**Methods** By utilizing an online questionnaire based on a study published by Mahmutovic et al., this cross-sectional study was performed on 202 undergraduates of different study curriculum in the University of Hong Kong. Undergraduates' perception on three aspects were investigated – general perception on PM, PG and GT; PM and PG education; and ethical, legal and social implications (ELSI) of GT. The primary outcome was the evaluation of undergraduates' perception on the above three aspects; and the secondary outcome was comparison of perception after stratification of undergraduates into medically and non-medically-related curriculum. Fisher's exact test and Chi Square Test were performed for comparison of categorical

responses, where the level of significance was set at  $p < 0.05$ .

**Results** Our results showed that 80% of undergraduates valued PM as a promising healthcare model with 66% indicating awareness of personal genome testing companies. Despite this high awareness and interest, 60% of undergraduates rated their genetic knowledge as 'School Biology' level or below and only 33% would consider ordering a PG test for themselves. In contrast, 76% of undergraduates considered undergoing a genetic test, with 77% willing to have lifestyle modifications upon knowing their genetic risk of a disease. In terms of PM and PG education, slightly more than half of medically-related curriculum undergraduates perceived that their curriculum was well-designed for learning PG (52%) and PG was important in their study (56%); and only 16% of these undergraduates would consider embarking on future education on PM. Regarding ELSI, 75% of undergraduates were aware of ethical issues of GT in general and they were more concerned about 'Patient Privacy' (80%) and 'Data Confidentiality' (68%). Upon receiving an unfavorable result from genetic testing, majority of undergraduates perceived to feel 'helpless or pessimistic' (56%), 'inadequate or different' (59%) and 'disadvantaged at job seeking' (59%), indifferent between medically and non-medically-related curriculum ( $p = 0.24, 1, 0.24$ ).

**Conclusions** Hong Kong undergraduates showed a high awareness of PM but in contrast there was insufficient knowledge and low interest in pursuing a career towards PM. They were generally aware of ethical issues of genetic testing and especially concerned about patient privacy and data confidentiality; and there appears to be a predominance of pessimistic views towards unfavourable genetic testing results. While this study may not be a representative of the general population, it calls for the attention to evaluate genomic education in Hong Kong.

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#### NEONATAL THROMBOCYTOPENIA — INCIDENCE, RISK FACTORS, CAUSES AND OUTCOMES FOLLOWING PLATELET TRANSFUSIONS

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**Background** Neonatal thrombocytopenia (NT) is defined as platelet counts less than 150,000/microL, is most common haematological abnormality in the neonatal periods particularly in preterm infants and VLBW.

**Objectives** We evaluated the maternal-neonatal risk factors, causes, day of onset, duration of NT and the indications of platelet transfusions by means of a retrospective cohort study over a 3-years period.

**Methods** We conducted a retrospective analysis of prospectively collected data of all neonates born at Singapore General Hospital from year 2017 to 2019. Maternal characteristics like (age, number of pregnancies, medical conditions including maternal thrombocytopenia, pre-eclampsia, pregnancy induced hypertension, maternal age, intrauterine growth retardation, placental Doppler, mode of delivery and multiple births.