(33.3%), nasogastric tube-feeding $n=8$ (15.7%), non-invasive ventilatory support $n=13$ (25.5%) and tracheostomy with ventilatory support $n=5$ (9.8%).

Advanced care plan (ACP) was discussed with 25 (50%) families. Among the 18 cases who died while receiving PPC, Do-Not Attempt Cardiopulmonary Resuscitation (DNACPR) was discussed with 15 (83.3%) of them. DNACPR had been discussed with 37.5% of the surviving cases. Median time from referral to death varied with the diseases: neoplasms (19 days), neurological conditions (54 days), congenital malformations and chromosomal anomalies (65 days), endocrine and metabolic conditions (174 days), external causes of morbidity (424 days). Forty-five percent of children passed away in the general paediatric wards (38.9%), Accident and Emergency Department (5.6%) while the remaining children passed away in the Intensive Care Units (44.4% in Paediatric ICU, 11.1% in Neonatal ICU). No patient died at home. Pain control medications were given during end-of-life period in 30.8% of cases.

Conclusions This review showed majority of children on palliative care stayed at home or residential schools and had high medical needs. Community support to these families was important. The time from referral to death was short. Advanced Care Plan was discussed with only half of the families. Less than one-third of patients received pain control at end-of-life. Paediatric palliative care service is under-developed and has to be largely promoted in Hong Kong.

420 MOM, I CAN'T BREATHE!

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Background Sinus of Valsalva aneurysm (SVA) is a rare cardiac anomaly, either acquired or congenital. This anomaly most often arises from the right coronary sinus, while less frequently arises from the non-coronary sinus or left sinuses. Ruptured sinus of Valsalva (RSOV), especially if it arises from the right coronary sinus, can cause acute symptoms of right sided heart failure. This is mainly because RSOV from right coronary sinus will lead to communication between aorta and right atrium or right ventricle, leading to a left to right shunt, hence causing right ventricle overload. RSOV can be an isolated lesion or associated with other cardiac lesions e.g. ventricular septal defect (VSD), aortic regurgitation, bicuspid aortic valve, and coarctation of aorta. RSOV rarely occurs in infancy and childhood; it mostly occurs after puberty or between 30's to 40's. Early and accurate diagnosis with early surgical intervention is the only way to improve survival in patient with RSOV.

Objectives To provide a review on our detection and management on RSOV.

Methods This is a case report of a teenager who was premorbid well, presented to a district hospital with acute heart failure symptoms.

Results A 14-year-old girl presented with chest pain, orthopnoea and reduced effort tolerance for 4 days. Physical examination revealed pansystolic murmur grade 4 with no hyperactive precordium. The electrocardiogram showed a normal rhythm with sinus tachycardia. Chest imaging showed neither any lung infection nor cardiomegaly. From the

preliminary echocardiography, there was presence of turbulence flow in the aortic root with small ventricular septal defect. Ruptured SVA was highly being suspected in this patient. She was started on anti-failure medications. Further assessment was done at tertiary centre by Paediatric Cardiologist, confirming the diagnosis of RSOV. Patient was referred to cardiothoracic team for repair and was discharged well without any post-operative complications.

Conclusions RSOV is a very rare cause of acute heart failure in paediatrics population. RSOV should be suspected in patient with small VSD on follow up, especially if patient present with acute heart failure. The diagnosis requires a high index of suspicion from history, to presentation, to investigation, such as echocardiography. It is a surgical emergency and early surgery is indicated.

425 ENSURING SAFE USE OF PRESSURISED METERED DOSE INHALERS WITHOUT A BUILT-IN DOSE COUNTER

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Background Most patients using pressurised metered dose inhalers (pMDIs) without a built-in dose counter often arbitrarily gauge the doses left in the canister using imprecise methods. As the delivered dose becomes variable beyond the labelled maximum dose for pMDIs, this imprecise practice may lead to patients receiving sub-therapeutic doses and putting their lives at risk, especially for reliever medication. Sub-therapeutic doses of controller medication may adversely affect asthma control. In some situations, patients may be discarding their pMDIs too early.

Objectives We propose a simple and cost-effective method to ensure safe use of pMDIs without a built-in dose counter.

Methods We created customised adhesive count stickers with running numbers up to the maximum dose for various pMDIs that can be pasted on the inhalers. Patients would struck off a number after the administration of a dose on the sticker, and were therefore able to keep track of the doses left on the pMDI. They were instructed to change to a new pMDI once the numbers on the count stickers were fully struck off. We compared the weight of the empty/used pMDIs collected from patients before and after the introduction of adhesive count stickers, to objectively assess if patients were changing to new inhalers too early or too late, and determine the effectiveness of the adhesive count stickers.

Results A total of 200 empty/used pMDIs were collected from patients both pre-intervention and post-intervention. Our results showed statistical significant differences in the weight of the canisters collected prior to and after the intervention. The median weight of the salbutamol pMDIs collected from patients pre-intervention was 9.495 g and post-intervention was 11.075 g. The median weight of the fluticasone dipropionate pMDIs collected from patients pre-intervention was 9.745 g and post-intervention was 12.145 g. There is statistically significant safety margin of 1.58 g and 2.40 g for each category of pMDI respectively. The adhesive count stickers were well received by the patients with good feedback.

Conclusions Our results suggest that without objective methods of dose counting, patients are using their pMDIs beyond the

labelled maximum dose and replacing with new inhalers too late for both reliever and controller medications. This is of clinical concern. The use of adhesive count stickers can help patients keep track of remaining doses objectively in a simple manner, with a good safety margin shown above. The use of the medication in the pMDIs can also be maximised with minimal wastage.

427 IMPROVING COMPLETION RATES OF ELECTRONIC DISCHARGE SUMMARIES

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Background Annual Trust data and previous audits in our department revealed a massive number of incomplete electronic discharge summaries (EDSs) over the last three years. This posed a great risk to patient safety as important information about the patients' diagnosis, management and follow up arrangements are not shared with the GP, other healthcare professionals or the patients themselves when the EDS is not completed before discharge from hospital. Previous attempts to address this issue had been unsuccessful or temporarily effective.

Objectives We aimed to improve EDS completion rates in our Department and sustain this improvement through time, thus achieving enhanced patient care and safety.

Methods This is an ongoing project involving all inpatients discharged from the Paediatric ward of our District Hospital and all staff involved in their discharge process. Using the methodology of the Institute for Healthcare Improvement (IHI), multiple, small sample, Plan- Do- Study- Act (PDSA) cycles were performed monthly from September 2020. Changes were introduced gradually, and their effect tested with each cycle, as described below:

Cycle 1: Introduced ban on patients' departure from the ward without a hard copy of the EDS, via asking the nursing team to no longer facilitate this, nor expect the EDS to be mailed to them.

Cycle 2: Introduced the monthly EDS completion rates competition: each week's and weekend's ward leading Consultants were scored according to the EDS completion rates achieved during their week. Results were illustrated in a poster in the doctors' office, emailed to the Consultants and shared in the Junior Doctors' whatsapp group. The top performing leaders were commended on and rewarded with a chocolate prize.

Cycle 3: Increased study sample (days audited). Learning points about possible alterations in everyday work that could enhance EDS completion, shared with the team.

Cycle 4: Illustrated the month's results in a themed, eye-catching poster and circulated to the team comparison between the first and this month, demonstrating great improvement.

Cycle 5- currently ongoing: monthly audit of completed EDSs and information sharing with the team via means established during the previous cycles.

Results Significant improvement in the EDS completion rates (from 73% on average for each Consultant team on their worst audited day, to 95%) was demonstrated throughout and has been so far sustained. Prolonged ward rounds and hand-overs, diminishing the time available to the team to complete

EDSs, were identified as possible factors for poor performance. Ambulating patients and mental health patients were most frequently the ones discharged without an EDS. Involving the Consultant body and turning the project into a game/competition, while including both nurses and doctors, seemed to boost staff engagement in the process and minimise resistance to change.

Conclusions Early team involvement, at all levels of seniority, can enhance the success of quality improvement projects addressing longstanding day-to-day clinical problems. Continuous positive reinforcement and information sharing lead to better results and sustained improvement.

428 ANCHOR PROGRAMME: PILOT HOME VISITATION PROGRAMME FOR CHILDREN WITH ADVERSE CHILDHOOD EXPERIENCES (ACES)

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Background Early childhood is a critical period for brain and biological development. Children with adverse childhood experiences (ACES) including maltreatment are at a high risk of developmental, behavioural and health problems lasting into adulthood. Anchor, a home visitation programme was commenced to support these children aged 0–3 years old who have been maltreated and their families.

Objectives 1.To review the uptake of the families into the programme 2. To understand the profile of the children and their families enrolled into the programme

Methods Children enrolled into the programme undergo baseline evaluation of their health, development and behavior through ASQ-3 (Ages and Stages Questionnaire, Third Edition), ASQ: SE 2 (Ages and Stages Questionnaire: Social Emotional, Second Edition), CBCL (Child Behavior Checklist), YCPC (Young Child PTSD Checklist) and M-CHAT (Modified Checklist for Autism in Toddler, Revised). The primary caregiver undergoes evaluation of mental health through PHQ-9 (Patient Health Questionnaire-9) and GAD-7 (General Anxiety Disorder-7), and an assessment of bonding with the child using PICCOLO (Parenting Interactions with Children: Checklist of Observations Linked to Outcomes). After multidisciplinary team discussion of the above assessments, cases are tiered. The frequency of home visitation is determined based on the tiering of the case and the intervention plan is developed in discussion with the family using the principles of family centered practice. Their needs are identified early and supported with relevant home-based interventions. These children and their caregivers are also referred to medical and community services, as deemed necessary.

Results By December 2020, a total of 121 cases were referred to Anchor. 57 (42%) of these cases are actively followed up by the programme. Approximately 15% of the referred families were not keen on the programme, while 3 of the families withdrew from Anchor. The remaining cases includes those that are pending enrolment and those rejected by the team as the family was being supported through other services. Physical abuse was the most common reason for referral. Approximately 50% of the children had a significant developmental delay (2 standard deviation) in at least 1 developmental