(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 diproprionate 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