



# NewsLetter

院訊

## *Hospital Development*

### *Medical Article:*

- A Case of Acute Epiglottitis in Adult
- Update of Neonatal Resuscitation

## *Pharmaceutical Updates*

## *Hospital Activities*





# 修女的話

爆竹一聲除舊歲，桃符萬戶更新春。  
首先，在此祝願各位  
雞年快樂、身體健康！



「勇於面對困難、接受新挑戰」，看似是老生常談。然而在現實生活中，很多人在面對逆境或挫折時，都會變得氣餒、意志消沉、甚至選擇以不同的方式去逃避問題。我們需知道，人生不如事十常八九，人生的道路就像天氣般變幻莫測，有時風光明媚，令人心曠神怡；有時風雨驟至，叫人措手不及。然而結局是否精彩，便視乎我們抱什麼態度去面對。

還記得上年里約奧運凝聚香港人焦點的香港場地單車代表李慧詩嗎？這位在牛頭角下邨成長的「牛下女車神」，從學校田徑運動轉戰職業單車競賽，患有貧血症，體力恢復比起一般運動員慢；2007年比賽時曾骨折受傷，養傷期間，教練曾想過勸退她，但堅毅的她並沒有放棄，繼續堅持接受艱辛的訓練，結果在2010年，她於亞運會的500米計時賽首次奪金，隨後更在多個國際體育比賽中獲得優異的成績。雖然上年她於里約奧運場地單車凱琳賽預賽次回合中遇上意外，與澳洲車手發生碰撞，連人帶車跌倒並受傷，未能順利完成賽事，但她不怨天、不尤人，以微笑面對餘下的比賽和挑戰，這種堅毅和樂觀的精神已贏盡香港人的心。

2017年將會是聖保祿醫院的一個重要里程碑——醫院擴建計劃完成，新大樓B座落成並於今年正式啟用。在籌備過程中，我們同樣遇到形形色色的困難、大大小小的問題，猶幸得到各部門和同事的通力合作，努力尋求解決辦法，使問題得以迎刃而解。新大樓的環境寬敞，並設有戶外花園，為住院病人提供更舒適的休養空間；備有多種高科技和先進儀器，為病人提供更優質、更專業的醫療服務；全院病牀數目將分階段增加，以應付社會日益增長的醫療需要。

隨著新大樓正式投入服務，聖保祿醫院員工或會面對更多的新挑戰和問題。雖然如此，我深信各位都能本著聖保祿宗徒「為一切人，成為一切」（格前9:22）的服務精神，努力面對和克服困難，繼續用心去關懷病人的心靈和情緒需要，為他們提供高質素的醫療服務。

願上主祝福你，保護你；  
願上主的慈顏光照你，仁慈待你。  
願上主轉面垂顧你，賜你平安。（戶6:24-26）

最後，我祝福每一位在天主的關懷和帶領下渡過豐盛的一年。主佑各位！

張柱見修女





# MESSAGE

FROM THE MEDICAL SUPERINTENDENT



**Dr. William Ho**  
Medical Superintendent



May I first wish everybody a happy and prosperous Year of the Rooster! With our long-awaited Block B development project nearing completion, I also look forward to a smooth commencement of operation in the new facilities by the Easter holidays. To our staff and visiting doctors alike, the most welcome improvements should certainly be many more lifts and escalators to travel across floors, an underground car park, new equipment, and much more spacious ward and operating theatre environments.

Looking back over the past year, it may appear rather uneventful at the surface. Hospital operations remained steady. Hospital incidents stayed low and not serious (touch wood). From the outside, our new Block B building seemed to have been completed even at the beginning of year. The ACHS surveyors' visit was relatively smooth sailing.

In actual fact, we worked very hard to achieve closure of 39 out of the hefty 40 recommendations from the last ACHS organization-wide survey. We endeavored to improve patient satisfaction and reduce risks. As a result we see notable drop in complaints and incidents; reduction in MRSA transmission, fall incidents and injury-on-duty rates; and improvement in hand hygiene compliance. We are very proud to have almost completed the transition to a new HIS (Hospital Information System) environment for both inpatients and out patients within a relatively short time span. While small glitches are unavoidable, there has been no major hiccups like what we experienced in 2010 when our first IT system was launched.

As for Block B, 90% of the work actually is behind the glass and concrete. Hospitals are among the most complex of buildings by virtue of the requirements for ventilation, infection control, pressure gradients, vertical and horizontal transport, radiation protection, dangerous chemicals and gases, super-reliable power supply, installation of major equipment ... and the list goes on. Add to this the myriad of statutory requirements that also seem to be changing all the time, it is daunting to say the least. But we are approaching our destination.

Perhaps the most novel happening last year was new government requirements on price transparency, including budget estimates for elective operations. This was uncharted water, and we foresaw unfavorable reaction from doctors. To make it workable, we consulted our nurses, staff doctors, and visiting doctors in our Clinical Advisory Committees. With their valuable input, we diligently worked out easy references for doctors, hence easing the process and facilitating compliance. I would like to thank our staff and visiting doctors for their patience and cooperation.

The ACHS surveyors did give us new tasks upon their recent visit. We still have some way to go for Hand Hygiene compliance particularly regarding doctors, especially before touching patient. We need to tackle Antibiotics Stewardship i.e. not using big guns unnecessarily, use appropriate prophylactic antibiotics before incision, and change from IV to oral where feasible. Remember to put down the "oral" route in prescriptions even though you think it's understood. And pay attention to legibility of hand writing on medical records.

2017 will doubtless be a busy year for us. Moving into the new Block B is a big milestone in our history. More important than the huge investment in hardware would be our service quality - both in terms of patient experience and the clinical quality. We need good systems and processes, teamwork, ingenuity, diligence, and above all the spirit to serve our patients with our whole heart. I look forward to your advice and active participation to lift our service to a new level. Best wishes again for everyone.





### Highlights

The commencement of service of the new 24-storey Block B building over 3-level basement will be a major milestone of St. Paul's Hospital Redevelopment Project. The new Block B will become the main clinical building of St. Paul's Hospital which will be in operation in 2017. There will be over 500 inpatient beds in provision; clients will have the choices of typical 4-bed general rooms, 2-bed semi-private rooms, and private or premium private rooms. All existing clinical services in Block A will be relocated to Block B, except Radiology Department which will retain the present site and expand into Block B LG1. Block A will then be modified to create an Auditorium, ambulatory centres such as Eye Centre and Dental Centre, and offices.

The colour scheme of Block B resembles a living tree, with a number of environmentally friendly set ups such as LED lighting in all operational areas, solar hot water system, oil-free chillers and centralized power control system for monitoring of the energy efficiency. There will be a new Boxveyor system which is dedicated to provide efficient vertical transportation of materials across floors. For vertical transportation of people, Block B is equipped with escalators across LG1, G/F, 1/F and 2/F, as well as a total of 16 lifts. There will also be an underground car park for doctors, other staff and visitors.



Laying of blessed stone at LG3, Block B.

23 MAR, 2012



Upper ground construction in process.

29 JUN, 2013



Topping Out Ceremony of Block B.

24 MAR, 2014



17 MAY, 2012



Assemble wall formwork for underground floors.

27 JAN, 2014



Construction of Block B almost complete.



Intelligent Lifts



Nurse Station



General Ward



Boxveyor System



Radiology Angio-IR Room



Outpatient Pharmacy

An outlook of the new Block B.

2016



24-Hour General Outpatient Service



2017



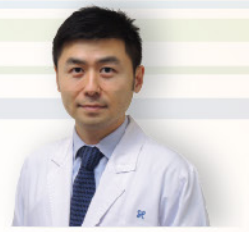
Block B in service.

Future



St. Paul's Hospital garden.



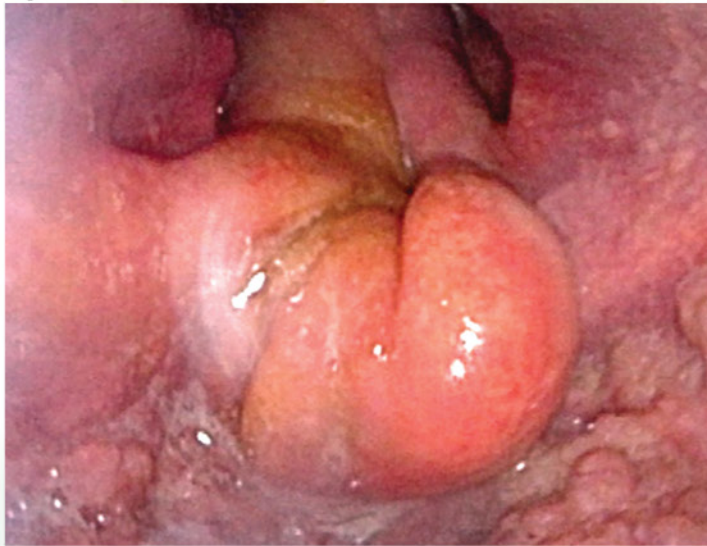


# A Case of Acute Epiglottitis in Adult

## Case presentation

A 44-year-old gentleman presented with acute onset of sore throat, fever and shortness of breath. He was a tourist from Mainland China and denied any symptoms before his departure which was less than 48 hours prior. Upon assessment, he was septic with increase respiratory effort and audible stridor. Operation theatre and ICU staffs were promptly informed for risk of potential airway obstruction. Emergency bedside flexible nasolaryngoscopy showed markedly swollen supraglottic structures were noted as showed in Figure 1.

Figure 1



Diagnosis of acute epiglottitis with pending airway obstruction were made and the patient was planned to have intubation in operation theatre. Unfortunately, the patient's condition rapidly deteriorated upon waiting for transfer to operation theatre and he developed respiratory arrest. Active resuscitations were initiated and patient was successfully intubated via direct laryngoscopy. Tracheostomy was being supplanted under general anesthesia as the preferred means of securing an endangered airway. Subsequently, he was treated with intravenous antibiotics and pulse steroid therapy to decrease the airway edema. He was successfully de-cannulated five days after operation and was subsequently discharged after one week of hospital stay.

## Introduction

Acute Epiglottitis is an acute inflammation in the supraglottic region of the oropharynx with inflammation of the epiglottis, vallecula, arytenoids, and aryepiglottic folds. It was believed that epiglottitis was the cause of death of the first President of United States of America, George Washington, who died on December 14, 1799.

## Epidemiology and Etiology

Acute epiglottitis was widely published in pediatric literature and the most common causative pathogen was *Hemophilus influenzae* type

B (Hib). However, with the introduction of Hib vaccines, recent surveys had demonstrated that acute epiglottitis is becoming a rare disease in children with annual incidence in children decreased from 3.47/100,000 to 0.63/100,000 in ten years' time. Whilst, literature showed the annual incidence of acute epiglottitis in adults ranged from 0.97/100,000 to 2.12/100,000. Moreover, it predominantly affected middle age, male patients.

Nevertheless, *Hemophilus influenzae* type B is still the most common pathogen. Other pathogens for acute epiglottitis are Group A and Group C beta-hemolytic streptococcus, *Streptococcus pneumoniae*, *Staphylococcus aureus* and *Hemophilus parainfluenzae*.

## Clinical features

When epiglottitis strikes, it usually occurs quickly and its progression may range from just a few hours to a few days. The most common symptoms and signs are shown in Table 1.

Table 1

Sore throat
Odynophagia and dysphagia
Fever and toxic in appearance
Drooling of saliva
Muffling of voice rather than hoarseness
Difficulty in breathing which relieve by leaning forward
Respiratory distress or Stridor

As some of the symptoms are rather common in patients' with upper respiratory infection. One must exercise high level of suspicious for acute epiglottitis if patient's symptoms such as odynophagia and dysphagia were out of proportion towards typical pharyngitis. Lateral soft tissue neck X-ray was the classical investigation of choice but it lacked specificity. Recently, an increased awareness of acute epiglottitis was accompanied by the widespread use of fiber-optic nasolaryngoscopy which has also shown to be more accurate and have not been found to precipitate airway obstruction.

## Management

The key to management of acute epiglottitis is securing the airway. Differed from pediatric cases, which all patients would be intubated, adults suffering from epiglottitis can be managed conservatively without intubation depending on the severity of the airway obstruction. However, it is difficult to predict which "stable" patient will obstruct suddenly. Thus, current consensus is to establish a definitive airway under controlled settings.



A number of options for definitive airway management of the adult with epiglottitis have been discussed in the literature. These include:

1. Awake oral or nasal intubation
2. Inhalation induction followed by intubation
3. "Rapid-sequence" induction with intravenous agents and muscle relaxants
4. Awake fiber-optic bronchoscopy with nasotracheal intubation
5. Tracheostomy under local anesthesia

For the patient in extremis, if awake intubation was unsuccessful, cricothyrotomy should be performed as a life-saving maneuver to relieve airway obstruction.

Antibiotics treatment such as 2<sup>nd</sup> or 3<sup>rd</sup> generation cephalosporin with activity against both *H. influenzae* and *Staphylococcus aureus* should be considered as crucial part of treatment.

The use of steroids to decrease airway edema was being recommended by some authors despite a lack of statistical evidence of efficacy.

## Conclusion

Adult acute epiglottitis is probably more common than is generally appreciated. It should be suspected in all patients with sore throat and dysphagia, especially if symptoms are out of proportion to pharyngeal inflammation. Unlike its paediatric counterpart, its presentation and course may be quite variable. Prophylactic intubation with or without tracheostomy were indicated for definitive airway management. The prognosis in adults with acute epiglottitis is good with appropriate and timely treatment. Most patients can be extubated or de-cannulated from tracheostomy within several days. However, unrecognized epiglottitis may rapidly lead to airway compromise and resultant death. Thus, high vigilance should always be maintained on this deadly condition.

### References:

1. Scheidemandel HIHE. Did George Washington die of Quinsy? Arch Otolaryngol 1976;102 (9):519-21.
2. Woo JKS, Van Hasselt CA. Acute epiglottitis: a misnomer. Otolaryngol Head Neck Surg 1994;111 (4):538-9.
3. Frantz TD, Rasgon BM. Acute epiglottitis: changing epidemiologic patterns. Otolaryngol Head Neck Surg 1993;109(3 pt 1):457-60.
4. Hebert PC, Ducic Y, Boisvert D, et al. Adult epiglottitis in a Canadian setting. Laryngoscope 1998;108(1 pt 1): 64-9.
5. Cohen EL. Epiglottitis in the adult. Recognizing and treating the acute case. Postgrad Med 1984;75(4):309-11.
6. Amdal H, Andreassen UK. Acute epiglottitis in children and adults. Nasotracheal intubation, tracheostomy or careful observation? Current status in Scandinavia. J Laryngol Otol 1988;102 (11):1012-6.
7. Barker KF, Patel B. Adult epiglottitis. Cefuroxime is effective. BMJ 1994;308(6933):919.

# Update of Neonatal Resuscitation

In year 2015, the American Academy of Paediatrics has issued a new guideline on neonatal resuscitation. It was recommended that by 1<sup>st</sup> January 2017, all institutions and learners should be using this 7<sup>th</sup> edition of neonatal resuscitation guideline.[1] This article serves to highlight some important points to readers on this new edition of neonatal resuscitation guideline. The full guideline can be downloaded at <https://eccguidelines.heart.org>

## Delayed cord clamping

Current evidence suggests that cord clamping should be delayed for at least 30 to 60 seconds for most vigorous term and preterm newborns. If placental circulation is not intact, such as after a placental abruption, bleeding placenta previa, bleeding vasa previa, or cord avulsion, the cord should be clamped immediately after birth. According to a systematic review published in 2013,[2] term infants with early cord clamping are over twice as likely to be iron deficient at three to six months compared with term infants whose cord clamping was delayed. For preterm infants, delaying cord clamping for 30 to 120 seconds was associated with less need for transfusion, better circulatory stability, less intraventricular haemorrhage (all grades) and lower risk for necrotising enterocolitis.[3]

## Oxygen use at birth

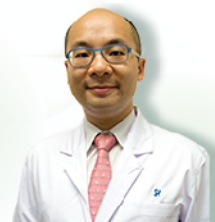
Resuscitation of newborns greater than or equal to 35 weeks' gestation should begin with 21% oxygen (room air), and resuscitation

of newborns less than 35 weeks' gestation should begin with 21% to 30% oxygen. Studies have shown that a reduction in mortality has been seen in infants resuscitated with room air, and no evidence of harm has been demonstrated.[4]

## Meconium stained amniotic fluid

According to the latest guideline, at least 2 resuscitation team members should be available at birth if meconium-stained amniotic fluid is present, and one of them should be competent in endotracheal intubation. If additional risk factors increase the likelihood of an extensive resuscitation, a team with full resuscitation skills should attend the birth.[1] If the infant born through meconium-stained amniotic fluid presents with poor muscle tone and inadequate breathing efforts, the initial steps of resuscitation should be completed under the radiant warmer, and positive pressure ventilation should be initiated if the infant is not breathing or the heart rate is less than 100/min after the initial steps was completed. Routine intubation for tracheal suction in this setting is no longer suggested as there is insufficient scientific evidence to support this practice.[5]

**Dr. Philip Sham**  
Specialist in Paediatrics  
St. Paul's Hospital







### Other important points

Start using 3-lead electrocardiogram (ECG) within first minute of resuscitation was suggested in the guideline because resuscitation providers may not assess heart rate accurately by auscultation or palpation, and pulse oximetry may underestimate heart rate. Use of the ECG does not replace the need for pulse oximetry to evaluate the newborn's oxygenation.[5]

### At St. Paul's Hospital

A neonatal resuscitation drill was conducted at St. Paul's Hospital on 7<sup>th</sup> September 2016 to offer hands on practice of this new neonatal resuscitation guideline to Paediatrician, nurses and health care assistants. Midwives and nurses working in nursery were involved in

the resuscitation drill. Technique of using ventilators and transport incubators were practiced. A similar resuscitation drill will be conducted in Block B before commencement of service there.

#### References:

1. American Academy of Paediatrics Neonatal Resuscitation Programme guideline. [http://www2.aap.org/nrp/docs/NRP%20Guidelines%20Flyer\\_English\\_Update.pdf](http://www2.aap.org/nrp/docs/NRP%20Guidelines%20Flyer_English_Update.pdf) Accessed 16<sup>th</sup> January 2017
2. McDonald SJ, Middleton P, Dowswell T, Morris PS. Effect of timing of umbilical cord clamping of term infants on maternal and neonatal outcomes. Cochrane Database of Systematic Reviews 2013, Issue 7. Art. No.: CD004074. DOI: 10.1002/14651858.CD004074.pub3
3. Rabe H, Diaz-Rossello JL, Duley L, Dowswell T. Effect of timing of umbilical cord clamping and other strategies to influence placental transfusion at preterm birth on maternal and infant outcomes. Cochrane Database of Systematic Reviews 2012, Issue 8. Art. No.: CD003248. DOI: 10.1002/14651858.CD003248.pub3
4. Tan A, Schulze AA, O'Donnell CPF, Davis PG. Air versus oxygen for resuscitation of infants at birth. Cochrane Database of Systematic Reviews 2005, Issue 2. Art. No.: CD002273. DOI: 10.1002/14651858.CD002273.pub3
5. Emergency Cardiovascular Care guideline website. <https://eccguidelines.heart.org/index.php/circulation/cpr-ecc-guidelines-2/part-13-neonatal-resuscitation/> Accessed 16<sup>th</sup> January 2017



# PHARMACEUTICAL

## UPDATES

After Drug and Therapeutics Committee (DTC) Meeting in December 2016, the following new drugs are approved:

<b>Bydureon (exenatide) 2mg pre-filled pen</b>	Type II diabetes mellitus (DM) in combination with: • Metformin • Sulphonylurea • Thiazolidinedione • Metformin and sulphonylurea • Metformin and thiazolidinedione  in adult who inadequate glycaemic control on maximally tolerated doses	Subcutaneous injection 2mg once weekly	Pharmacy also keeps Byetta (exenatide) 10mg twice daily injection.
<b>Toujeo (insulin glargine) 300 units/mL Solostar injection</b>	A long-acting human insulin analogue indicated to improve glycaemic control in adult with type I and type II diabetes mellitus	subcutaneous injection once daily	Toujeo has the same active glargine as Lantus Solostar, but the two preparations are NOT bioequivalent.
<b>Jardiance Duo (empagliflozin/metformin) 5mg/1000mg &amp; 12.5mg/1000mg tablet</b>	A combination of empagliflozin (SGLT2 inhibitor) and metformin (biguanide), indicated as adjunct to diet & exercise to improve glycaemic control in adults with type 2 DM inadequately controlled on their maximal tolerated dose of: • metformin alone • metformin in combination with other glucose-lowering medicinal products including insulin • Already treated with combination of empagliflozin & metformin	Twice daily dose with meals, gradually escalated dose to reduce GI side effects due to metformin (max. daily dose = 25mg / 2000mg)	
<b>Brintellix (Vortioxetine) 5,10 &amp; 20mg tablet</b>	For major depressive episodes in adult	Starting at 10 mg once daily in < 65 years old and 5 mg once daily in ≥ 65 years old.  May be increased to a maximum of 20 mg once daily	Recommendations from drug manufacturer: • Decrease dose to 10mg/day for a week before full discontinuation • Treatment for at least 6 months is recommended after the depressive symptoms resolve
<b>Atozet (Ezetimibe/Atrovastatin) 10mg/10mg &amp; 10mg/20mg tablet</b>	1. Primary (heterozygous familial or non-familial) hypercholesterolaemia or mixed hyperlipidaemia where use of a combination product is appropriate: • Not appropriately controlled with statin alone • Already treated with a statin and ezetimibe 2. homozygous familial hypercholesterolaemia	One tablet once daily	
<b>Eklira Genuair (Acridinium 322mcg)</b>	Inhalation powder indicated as maintenance treatment for symptomatic relieve of chronic obstructive pulmonary disease (COPD)	one puff twice a day	Genuair is a new 2 step device with delivery verification" • A click sound should be heard if inhaling correctly • Control window turns from green to red when inhalation is completed successfully • Genuair will lock when final dose has been reached to prevent patients from using an empty inhaler
<b>Duaklir Genuair (Acridinium 340mcg/Formoterol 12mcg)</b>	As maintenance bronchodilator treatment for symptomatic relieve of chronic obstructive pulmonary disease (COPD) in adult	one puff twice a day	Genuair cannot be used with spacer
<b>Tresiba (degludec 100units/mL) FlexTouch injection</b>	A long-acting insulin analogue indicated for Type I and Type II diabetes mellitus (T2DM) in adult	once daily subcutaneous injection	On occasions when administration at the same time of the day is not possible, insulin degludec allows for flexibility in the timing of administration, a minimum of 8 hours between injections.



# A Novel Therapy for Hypercholesterolemia

## PCSK9 Inhibitor

### Introduction

For decades, statins have been playing a crucial role in lipid-lowering therapy for hypercholesterolemia. Yet, not all patients experienced desirable response and intolerability issues, such as myopathy, might limit their use. The recent breakthrough of novel lipid-lowering therapy, proprotein convertase subtilisin kexin type 9 (PCSK9) inhibitor, might offer a better option for specific patients.

Repatha (evolocumab) and Praluent (alirocumab) are the first two PCSK9 inhibitors. They are both licensed by the Food and Drug Administration in 2015 for the treatment of primary hypercholesterolemia: adjunct to diet and maximally tolerated statin therapy in adults with heterozygous familial hypercholesterolemia (HeFH) or clinical atherosclerotic cardiovascular disease (CVD), who require additional lowering of low density lipoprotein cholesterol (LDL-C). Additionally, Repatha is an adjunctive treatment to diet and other LDL-lowering therapies for patients with homozygous familial hypercholesterolemia (HoFH) who require additional lowering of LDL-C.

### How Does PCSK9 Inhibitor Work?

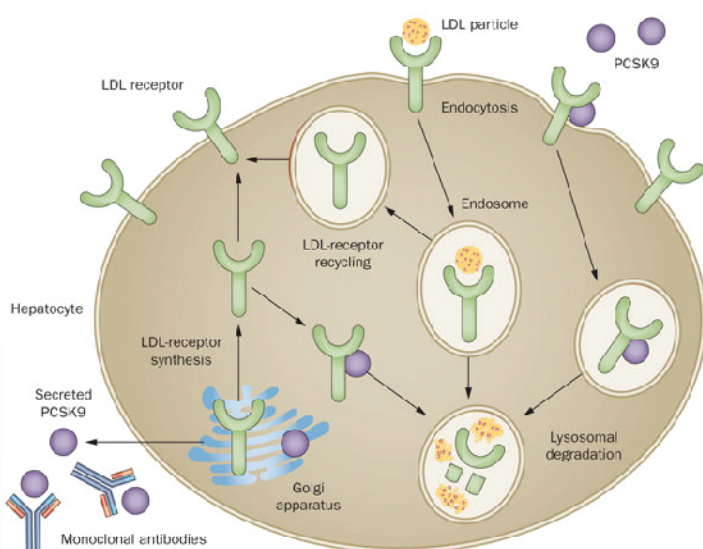


Image 1: Mechanism of PCSK9 Inhibitor

Evolocumab and alicumab are human monoclonal immunoglobulins with high binding affinity for PCSK9. Primarily synthesized in the liver and secreted into the blood, PCSK9 leads to LDL-C receptor (LDLR) degradation and thereby reducing LDL-C clearance by binding to LDLR located on the hepatic cell surface. By inhibiting the binding of PCSK9 to LDLR, evolocumab and alicumab increase the number of LDLR, and hence the reduction of plasma LDL-C level.

### Efficacy and Safety

#### Evolocumab

The efficacy of evolocumab was demonstrated in 4 randomized controlled trials (RCTs) comparing evolocumab with ezetimibe or placebo.

In a multicenter, double-blind, RCT (LAPLACE-2, study 1), 296 patients with atherosclerotic CVD were initially randomized to atorvastatin 80mg, rosuvastatin 40mg, or simvastatin 40mg for a 4-week lipid stabilization period followed by random assignment to subcutaneous injections of evolocumab 140mg every 2 weeks, evolocumab 420mg once monthly, or placebo for 12 weeks. The primary endpoint, mean percent change in LDL-C between the two evolocumab regimens and placebo, were -71% (95% CI: -81% to -61%; p-value<0.0001) and -63% (95% CI: -76% to -50%; p-value<0.0001) respectively.

Acceptable safety profile was demonstrated in individual studies for evolocumab. It is generally well tolerated. A summary of an integrated analysis of the safety data from 6,026 patients with primary hypercholesterolemia or mixed dyslipidemia who had any dose of evolocumab is shown below:

Compared to the control arms (placebo or ezetimibe):

- the incidence of adverse events was 51.1% compared with 49.6%
- serious adverse events (eg. myalgia) occurred in 2.8% patients compared with 2.1%
- 1.9% patients stopped treatment because of an adverse event compared with 2.3%

Despite the LDL-C lowering effect and the acceptable safety profile, all trials excluded patients with type 1 diabetes, or poorly controlled type 2 diabetes, who are likely to present with hypercholesterolemia or mixed dyslipidemia. Besides, the effects on cardiovascular outcomes have not been demonstrated in the studies although other studies have shown correlation between reduced LDL-C level and reduced cardiovascular events.

#### Alicumab

Trials evaluating alicumab add-on to maximally tolerated dose statins with or without other lipid-modifying therapies including ezetimibe were performed.

In a multicenter, double-blind, placebo-controlled trial, 72 patients were randomly assigned to alicumab 150mg every 2 weeks and 35 patients to placebo. All patients were diagnosed with HeFH and they were taking a maximally tolerated dose of statin with or without other lipid-modifying therapy.





The treatment difference between alirocumab and placebo in mean LDL-C percent change was -36% (95% CI: -49% to -24%; p-value<0.0001) at week 24.

The safety of alirocumab was evaluated in 9 placebo-controlled trials including 2,476 patients receiving alirocumab. Among them, 2,135 exposed for 6 months and 136 exposed for more than 1 year. At baseline, 37% of them were diagnosed with HeFH and 66% with CVD. The percentage of adverse event-associated treatment discontinuation in patients treated with alirocumab was 5.3% compared to 5.1% with placebo. The most common adverse reaction leading to treatment discontinuation in patients treated with alirocumab was local injection site reactions.

The rate of adverse events was similar between alirocumab and control arms in the studies evaluating the safety profile. There was no observed difference between alirocumab 75mg and 150mg in this regard.

The effect of alirocumab on cardiovascular outcomes, same as evolocumab, has not been determined in spite of the LDL-C lowering effect in patients with primary hyperlipidaemia.

### Monitoring

Monitoring of LDL-C level 4 to 8 weeks after initiation or dose titrations, as well as signs and symptoms of hypersensitivity reactions, if any, might be warranted for both evolocumab and alirocumab.

Brand Name	Repatha (Evolocumab)	Praluent (Alirocumab)
<b>Product Description</b>	Pre-filled autoinjector (or syringe) 140mg/mL	Prefilled pen (or syringe) 75mg/mL
<b>Dosing</b>	Primary hyperlipidemia: • 140mg every 2 weeks, or • 420mg once monthly *#  Homozygous familial hypercholesterolemia: • 420mg once monthly *	Primary hyperlipidemia: • 75mg once every 2 weeks @
<b>Administration</b>	Subcutaneously	
<b>Renal Adjustment</b>	Mild to moderate impairment: no dosage adjustment necessary. Severe impairment: No data available	
<b>Hepatic Adjustment</b>	Mild to moderate impairment: no dosage adjustment necessary. Severe impairment: no dosage adjustment provided in the manufacturer's labeling (has not been studied).	
<b>Common Adverse Effect</b>	Nasopharyngitis Back pain Upper respiratory tract infection Arthralgia Nausea	Nasopharyngitis Injection site reactions Influenza Urinary tract infection Diarrhea
<b>Drug Interaction</b>	Belimumab: Monoclonal antibodies may enhance the adverse/toxic effect of Belimumab. Risk X: avoid combination	
<b>Availability at SPH</b>	Order on request only	Order on request only

\* give with 3 injections consecutively within 30 minutes

# when switching dosage regimens, administer the first dose of the new regimen on the next scheduled date of the prior regimen

@may increase to 150mg once every 2 weeks if an adequate response is not achieved within 4 to 8 weeks

Table 1: Comparison of evolocumab and alirocumab

#### References:

1. Titus W P van den Heuvel, A Adam F Cohen B, Robert Rissmann. European drug market entries 2015 with new mechanisms of action. Clin Med. 2016 Oct; 16(5):475-480.
2. Nature. Mechanism of PCSK9 inhibition with monoclonal antibodies [Image on internet]. 2013 Sep 10 [cited 2016 Nov 8]. Available from: [http://www.nature.com/nrcardio/journal/v10/n11/fig\\_tab/nrcardio.2013.139\\_F1.html](http://www.nature.com/nrcardio/journal/v10/n11/fig_tab/nrcardio.2013.139_F1.html)
3. Robinson JG, Nedergaard BS, Rogers WJ, et al; LAPLACE-2 Investigators. Effect of evolocumab or ezetimibe added to moderate- or high-intensity statin therapy on LDL-C lowering in patients with percholesterolemia: the LAPLACE-2 randomized clinical trial. JAMA. 2014;311(18):1870-1882.
4. Repatha (evolocumab) [prescribing information]. Thousand Oaks, CA: Amgen; July 2016.
5. Praluent (alirocumab) [prescribing information]. Bridgewater, NJ: Sanofi-Aventis US LLC; July 2015.
6. National Institute for Health and Care Excellence. Evolocumab for treating primary hypercholesterolaemia and mixed dyslipidaemia. Technology appraisal guidance; 22 June 2016.
7. National Institute for Health and Care Excellence. Alirocumab for treating primary hypercholesterolaemia and mixed dyslipidaemia. Technology appraisal guidance; 22 June 2016.



Effective January 2017, the Clinical Pathology Laboratory offers whole blood Lactate test with the Siemens RAPIDPoint 500 Blood Gas Analyzer. The turnaround time is 2 hours. The test requires whole blood in heparinized syringe with transport in ice bath. For details, please contact the Clinical Pathology Laboratory at extension 8885.

Some clinical scenarios where the whole blood lactate test may be useful include:

1. Investigation of metabolic acidosis.
2. In diabetic patients with suspicion of Metformin-induced lactic acidosis.
3. In pediatric sepsis, measurement of lactate levels may have utility in early risk stratification.
4. In children with developmental delay, as part of screening for inborn error of metabolism, especially for mitochondrial disease.
5. Work up of patients with suspected mitochondrial diseases (e.g. MELAS syndrome for young stroke patients, MERFF syndrome for young patients with myoclonus, Kearns-Sayre syndrome for patients with ophthalmoplegia).





## 沙爾德聖保祿女修會總會長到訪聖保祿醫院

2016年11月14日，沙爾德聖保祿女修會總會長 (Mother Maria Goretti LEE) 與第一副會長 (Sister Mary Ann LAURIN) 一同到訪聖保祿醫院。除參觀醫院新大樓的新設施外，還到各個部門參觀，了解醫院現時運作及未來發展方向。



## 農曆除夕團圓彌撒



2017年1月18日，關傑棠神父為本院主禮農曆除夕團圓彌撒，以感謝天主在猴年賜予各項恩典，並為來年祈求恩寵與平安。

「請你們稱謝上主，因為祂是美善的，又因為祂的慈愛永遠常存。」  
(詠158)

你們「不要為生命思慮吃什麼，也不要為身體思慮穿什麼，因為生命貴於食物，身體貴於衣服。」(路 12：22-23)。福音中指出天上的飛鳥及地下的花朵不比我們尊貴，尚能得到天主的看顧，是要提醒我們天主賜給我們許多恩惠，即使在生命中遇上各樣的起伏、困難和考驗，藉著祂的愛，我們都有力量去面對。在病房中工作，使人能參透人生中生老病死的過程，感嘆人生無常，領悟人生的有限和短促，因此我們更應懂得去愛主愛人。關神父引用沙灘足印的故事，說出天主如何在人面對低谷時，不離不棄、加以扶助。最後，關神父讓我們感謝天主過去一年的眷顧，祈求天主繼續保守我們，賜予力量和健康，讓我們多一分包容、忍耐、寬恕和愛心，在病房工作上，發放正能量，積極地面對人生，傳揚基督的愛。

彌撒後，各同事獲發經關神父祝聖的祝福包，以祝福各人工作順利，生活愉快，身體健康。然後一同享用茶點，分享近況，互相問好。

願我們在崗位上洞悉病人的需要，從服務中尋到無限的喜樂。

牧靈部







## 二零一六年 聖保祿醫院聖誕聯歡晚宴

2016年聖保祿醫院聖誕聯歡晚宴於12月14日及15日假座銅鑼灣富豪酒店舉行，共延開78席，千名來賓蒞臨，當中包括神父、修女、醫生及各部門的同事，濟濟一堂，一同歡度聖誕佳節。

晚宴開始前，本院先頒發長期服務獎予服務了十年、二十年及三十年的同事，感謝他們多年來與醫院並肩而行，一同成長，亦鼓勵其他同事繼續努力，在工作崗位上發光發熱，為病人提供優質醫護服務。

晚宴於神父帶領祈禱後正式開始，首先是令全場氣氛升溫，人人有份，永不落空的台獎環節。緊接是幸運大抽獎，獎品琳瑯滿目，眾嘉賓均聚精匯神留意自己會否是得獎幸運兒。隨後是萬眾期待的表演項目，今年很榮幸邀得方津生醫生及黃亨亨醫生為第一晚晚宴打響頭炮；而黃亨亨醫生更於第二晚再度登場，與袁兆燦醫生高歌一曲，溫柔婉約與雄渾剛勁的歌聲，伴以劉業光醫生及謝啟聰醫生的妙韻琴音，讓全場嘉賓聽得如癡如醉。

精彩節目浪接浪，去年技驚四座的「PAUTLES」再次粉墨登場，為晚宴作壓軸演出。謝德新醫生、劉業光醫生、謝啟聰醫生及劉子榮醫生展現非凡默契，獻唱多首歌曲，加上同事別出心裁的打氣方式，令晚宴氣氛攀升至最高點。最後，眾嘉賓盡慶而歸，晚宴亦於一片祝賀聲與歡笑聲中圓滿結束。

