



# TOGETHER IN HEALTH

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**Alexandra Health System**  
Annual Report 2015/2016

# Contents

<b>2</b>	Message from Chairman
<b>4</b>	Board of Directors
<b>6</b>	Senior Management
<b>8</b>	Heads of Department
<b>9</b>	The Alexandra Health Story
<b>13</b>	Keeping Well and Healthy
<b>21</b>	Driving Positive Change
<b>27</b>	Recovering Well
<b>35</b>	Managing Chronic Diseases
<b>41</b>	Coping Better at Home
<b>45</b>	Fulfilling Last Wishes
<b>49</b>	Our People: The Heart of AHS
<b>54</b>	Operational Highlights
<b>55</b>	Awards

## OUR VISION

Help our people live a long, healthy life and support them with thoughtful, dignified care to the end.

## OUR MISSION

Provide good quality, affordable and hassle-free healthcare with science, love and wisdom.

## OUR CARE PHILOSOPHY

Care that is good enough for our own mothers without making special arrangements.

# Message from Chairman



**Alexandra Health System (AHS) was first formed in 2008. With the opening of Khoo Teck Puat Hospital (KTPH) in 2010, we began our story as a single-institution health system. Five years later on 28 December 2015, AHS added a new chapter with the opening of Yishun Community Hospital (YCH). The addition of the 428-bed community hospital initiated our transformation into a regional healthcare network.**

### **RIGHT CARE, RIGHT TIME, RIGHT SETTING**

We provide care and support for residents in the North at all stages of health through disease prevention, holistic management of illnesses, ageing-in-place support and dignified end-of-life care. The rehabilitative and sub-acute care settings at YCH complement KTPH's acute care setting as well as AHS's Ageing-In-Place Programme that extends care to homes of patients who have been discharged.

We continue to seek improvement in our services, to deliver our promise of better, faster, safer and cost-effective care. KTPH's nurse-led pre-operative assessment for cataract surgery is one such initiative to better health outcomes and patient experience. In the past year, KTPH's efforts in providing holistic, multidisciplinary care to patients with diabetes have also been recognised through the PS21 Star Service Team Award.

I am pleased to congratulate Mrs Chew Kwee Tiang, KTPH Chief Executive Officer (CEO), for being recognised as a "Leading CEO" at the 2015 Singapore HR Awards.

The AHS Board is proud that the KTPH team has achieved yet another year of outstanding performance in the Ministry of Health Patient Satisfaction Survey 2015. Much of this can be credited to the commitment of our doctors, nurses, allied health professionals and hospital administration.

The Board is also very pleased to welcome Associate Professor (A/Prof) Pek Wee Yang as the new Chairman of the Medical Board (CMB) of KTPH. We thank A/Prof Kenneth Mak for his contribution as CMB of KTPH from 2011 to 2015 and wish him well in his current role as Deputy Director of Medical Services at the Ministry of Health.

### **NEXT CHAPTER**

We will build on the strength of our integrated regional health ecosystem and look forward to the opening of Admiralty Medical Centre, Sembawang Primary Care Centre and Woodlands Integrated Health Campus in 2017, 2019 and 2022, respectively. Together, they will enable us to fulfil our mission to provide good quality, affordable and hassle-free healthcare for residents in the North.

On behalf of the Board, I would like to express my appreciation to the Ministry of Health, government agencies, our community partners and friends who have guided and supported us in our journey. We look forward to many years of continued partnership, hand in hand, **together in health.**

### **Jennie Chua**

Chairman, Alexandra Health System

# Board of Directors



**Ms Jennie Chua**  
Chairman, Alexandra Health System



**Ms Mavis Khoo**



**Mr Seah Moon Ming**



**Mr Douglas Foo**



**Mr Robert Chew**



Mr Anthony Seah



Dr Quek Peng Kiang



Mr Ramlee Bin Buang



Ms Teoh Zsin Woon



Mr Tan Boon Khai



Mr Liak Teng Lit



Mr Roger Leong  
Company Secretary

We would like to thank Mr Ong Ye Kung for his contribution (up till September 2015).

# Senior Management



**Mr Liak Teng Lit**  
Group Chief Executive Officer,  
Alexandra Health System



**Mrs Chew Kwee Tiang**  
Chief Executive Officer,  
Khoo Teck Puat Hospital



**Dr Pauline Tan**  
Chief Executive Officer,  
Yishun Community Hospital



**Ms Low Beng Hoi**  
Chief Nurse,  
Alexandra Health System



**Ms Yen Tan**  
Chief Operating Officer,  
Khoo Teck Puat Hospital



**Mr Samuel Ng**  
Chief Operating Officer,  
Yishun Community Hospital &  
Senior Director, Special Projects,  
Alexandra Health System



**Mr Roger Leong**  
Chief Financial Officer,  
Alexandra Health System



**Dr Howard Foo**  
Senior Director, Clinical Manpower  
Planning, Alexandra Health System &  
Chief, Corporate Services,  
Woodlands Integrated Health Campus



**Ms Caroline Lim**  
Director, Alexandra Health Institute  
and Group Corporate Communications,  
Alexandra Health System



**Mr Bastari Irwan**  
Director, Transformation Office,  
Alexandra Health System

**We would like to thank the following for their contribution:**

- Ms Lynn Gan, Chief Human Resource Officer, Alexandra Health System (up till January 2016); and
- A/Prof Kenneth Mak, Chairman, Medical Board, Khoo Teck Puat Hospital (up till December 2015).



**Dr Jason Cheah**  
Chairman, Pro-tem  
Planning Committee,  
Woodlands Integrated Health Campus



**A/Prof Pek Wee Yang**  
Chairman, Medical Board  
and Senior Consultant,  
General Medicine,  
Khoo Teck Puat Hospital



**A/Prof Pang Weng Sun**  
Chairman, Medical Board,  
Yishun Community Hospital &  
Senior Consultant, Geriatric Medicine,  
Khoo Teck Puat Hospital



**Dr Wong Sweet Fun**  
Chief Transformation Officer,  
Alexandra Health System,  
Deputy Chairman, Medical Board,  
Yishun Community Hospital &  
Senior Consultant, Geriatric Medicine,  
Khoo Teck Puat Hospital



**Mr Alvin Ong**  
Chief Information Officer,  
Alexandra Health System



**Dr Wong Moh Sim**  
Deputy Chairman, Medical Board,  
Head and Senior Consultant,  
Laboratory Medicine,  
Khoo Teck Puat Hospital



**Dr Terence Tang**  
Deputy Chairman, Medical Board, and  
Head and Senior Consultant,  
Geriatric Medicine,  
Khoo Teck Puat Hospital



**Ms Cheong Choy Fong**  
Director, Quality Management Office,  
Alexandra Health System



**Mr Donald Wai**  
Director, Hospital Planning,  
Alexandra Health System



**Mr Lim Theam Siew**  
Director, Corporate Development  
and Business Office,  
Alexandra Health System

**We would also like to thank** Dr Michael Wong for his contribution as Deputy CMB (up till January 2016).  
He continues his role as the Head of Department, Health for Life Centre.

# Heads of Department

## KHOO TECK PUAT HOSPITAL

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- 1. Dr Francis Lee**  
Head and Senior Consultant,  
Acute & Emergency Care Centre
- 2. Dr Edwin Seet**  
Head and Senior Consultant, Anaesthesia
- 3. Dr Ong Hean Yee**  
Head and Senior Consultant, Cardiology
- 4. Dr Wu Loo Cheng**  
Head and Senior Consultant, Dental Surgery
- 5. A/Prof Sum Chee Fang**  
Director, Diabetes Centre
- 6. Prof Wilfred Peh**  
Head and Senior Consultant, Diagnostic Radiology
- 7. Dr Phoa Lee Lan**  
Head and Senior Consultant, General Medicine
- 8. A/Prof Yip Chee Chew**  
Head and Senior Consultant,  
Ophthalmology & Visual Sciences
- 9. Dr David Loke**  
Head and Senior Consultant, Otolaryngology
- 10. Dr Chan Keen Loong**  
Head and Senior Consultant, Psychological Medicine
- 11. A/Prof Tan Kok Yang**  
Head and Senior Consultant, General Surgery
- 12. Dr Colin Teo**  
Head and Senior Consultant, Urology
- 13. Dr Michael Wong**  
Head and Senior Consultant, Health for Life Centre
- 14. Dr Doreen Tan**  
Chief Pharmacist and Head, Pharmacy
- 15. Ms Jenny Goh**  
Head, Medical Social Services
- 16. Ms Wendy Lim**  
Head, Rehabilitative Services
- 17. Ms Gladys Wong**  
Chief Dietitian and Head,  
Nutrition & Dietetics Department
- 18. Ms Fatimah Moideen Kutty**  
Director, Operations
- 19. Dr Mary Ho**  
Director, Clinical Services

We would like to thank Dr Andy Wee, Head and Senior Consultant, Orthopaedic Surgery, for his contribution (up till 31 March 2016).

## YISHUN COMMUNITY HOSPITAL

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- 1. Dr Lee Kok Keng**  
Head, Medical Services
- 2. Mdm Chua Gek Choo**  
Director, Nursing
- 3. Ms Low Suat Fern**  
Principal Pharmacist
- 4. Ms Chua Ee Cheng**  
Principal Medical Social Worker
- 5. Ms Lynn Chua**  
Senior Principal Physiotherapist
- 6. Ms Chan Sue Mei**  
Principal Dietitian

# The Alexandra Health Story



## THE ALEXANDRA HEALTH STORY

Advancements in medical science have contributed to increasing life expectancy. We now live longer but studies show that we are not living better. In fact, the number of healthy years without illness is decreasing. This means that while more people survive diseases that were once deadly, they now live longer with disabilities, chronic diseases and pain.

A paper in *The Lancet*<sup>1</sup> reveals that in Singapore, men are expected to spend an average of 10 years in poor health, while women live almost 13 years with some sort of illness. This problem of grappling with poor health as we age is the reason why AHS is working to change the way Singaporeans think about their health.

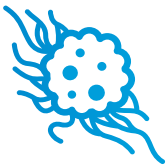
Instead of treating illnesses when they arise, we hope that our effort motivates Singaporeans to take charge of their health to live more healthy years, prevent illnesses or manage their chronic diseases better to achieve quality of life.

## A STORY OF PREVENTION AND REHABILITATION

The Alexandra Health Story we are writing in the North is one of prevention and rehabilitation that is backed by education and intervention. We know we can prevent illness, delay the health complications of chronic disease, reduce the need for hospitalisation and allay high medical costs through specific interventions.

## FIRST WORLD CHRONIC CONDITIONS

Leading causes of morbidity and mortality in Singapore



Cancer



Hypertensive disease



Ischaemic heart disease



Cerebrovascular disease (including stroke)



Kidney disease

These chronic conditions are sometimes called "lifestyle" diseases, diseases of longevity or diseases of civilisation because they are strongly linked to our modern lifestyles and choices. The risk of these diseases increases as a result of:



Poor diet



Sedentary lifestyle



Smoking



Stress



Excessive alcohol consumption






<sup>1</sup>Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy' (July 12, 2012) The Lancet. Volume 380, Issue 9838, Pages 219 – 229, 21. Available at: [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(12\)61031-9/abstract](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(12)61031-9/abstract)

To do this effectively, we need to better understand our community, their health status, lifestyles and health needs. As we reached out to our residents, we found that our residents fell mainly into five segments, namely:

- the Well Healthy;
- the Well Unhealthy;

- the Unwell Unhealthy (Early);
- the Unwell Unhealthy (Advanced); and
- the Frail and Dying.

This knowledge has helped us to develop targeted programmes for each segment, which you will read about in the following chapters.

MANAGING THE POPULATION IN THE NORTH					
Population Stratification	 <p><b>Well Healthy</b></p> <p>People who take ownership of their health by exercising regularly and eating healthily</p>	 <p><b>Well Unhealthy</b></p> <p>People who are unaware that their unhealthy lifestyles may put them at risk of developing chronic illnesses</p>	 <p><b>Unwell Unhealthy (Early)</b></p> <p>People with medical exigencies and patients with existing chronic illnesses</p>	 <p><b>Unwell Unhealthy (Advanced)</b></p> <p>Patients with multiple medical conditions that are poorly managed</p>	 <p><b>Frail and Dying</b></p> <p>Patients with multiple medical conditions who are usually bed-ridden and living out the last 1,000 days of their lives</p>
Major Care Thrust	Prevention, lifestyle change		Chronic disease management		End-of-life care
	Acute episodic care				
Care Settings	Community Nurse Posts		Homes, Nursing Homes		
	GPs, Polyclinics, Sembawang Primary Care Centre		Admiralty Medical Centre		
	Khoo Teck Puat Hospital, Yishun Community Hospital, Woodlands Integrated Health Campus				
Programmes	Community health programmes		Ageing- and Dying-in-place		



Artist's impression of the main lobby of Admiralty Medical Centre.

## GROWING OUR NETWORK OF CARE

AHS serves more than 800,000 residents in the North of Singapore. To support the healthcare needs of our residents, we are planning and building three other facilities: Admiralty Medical Centre (AdMC), Woodlands Integrated Health Campus (WIHC) and Sembawang Primary Care Centre (SPCC).

The AdMC will occupy two floors in the Kampung Admiralty development. It will offer specialist outpatient consultation, day surgery services and community health programmes. AdMC is well on target for its scheduled 2017 opening.

To prepare for WIHC's opening in 2022, AHS began recruiting its clinical team in 2015 and has since built up a team of doctors, nurses and allied health professionals. WIHC will extend our efforts to bring the right level of care to patients, and to heighten health education, chronic disease management and responsible self-care. Construction of WIHC will commence with the groundbreaking ceremony in 2017.

The third planned facility in our network care is SPCC, which will be opened in 2019. It will complement existing AHS facilities and services by making primary care more accessible.

Together, we hope to help our people live long, healthy lives and support them with thoughtful, dignified care to the end.



It's not good to sit at home  
and just watch television.

Mdm Lynda Ngiam, 69 (centre)



# HER STORY OF KEEPING WELL AND HEALTHY

## • Mdm Lynda Ngiam

Trim and energetic, Mdm Ngiam exudes a youthful spirit that belies her age. The homemaker picked up line dancing 10 years ago and now teaches the dance to over 50 students each week. “I’ve always been very active,” shared the mother of two and proud grandmother of a seven-month-old grandson. “I used to do social dancing when I was younger... I’ve been exercising all my life.”

Her eating habits – lots of fruits and vegetables and no unhealthy snacking – and active lifestyle are her “secret” to youth. She said, “I always encourage my dance students, friends and neighbours to be more active. Even light exercise, stretches or short walks are helpful. It’s not good to sit at home and just watch television.”

To Mdm Ngiam, one of the most important ways to keep well is to find something of interest. Dance, with its combination of music and movement, is her preferred sport. “It can be challenging but it is fun. Even if you find the steps difficult, you can just move with the music and have fun,” said Mdm Ngiam, who teaches in her neighbourhood and at KTPH. She has even taught at an old folks home where she adapted her dance moves so the elderly in wheelchairs could just use their arms to dance. “Anyone can do it,” she enthused, “I urge everyone to give it a try. Dance is not only for a healthy body, but an alert mind and a happy heart!”

## KEEPING WELL AND HEALTHY

With her active lifestyle and good eating habits, Mdm Ngiam belongs to a segment of the northern population who takes ownership of their health. These well and healthy residents make up 30% of the northern population.

Like Mdm Ngiam, we know that health is the greatest gift that we have; with it, we can fully enjoy life and all it has to offer. Keeping well in both body and mind should be a long-term and lifelong habit. At AHS, we want to support the community in this sustained effort through proactive and varied channels.

Taking good care of one’s health and inculcating healthy lifestyle choices have a far-reaching impact on the quality of life; it goes a long way to reducing the risk of illness later in life. The World Health Organization (WHO) has identified three behaviours that can prevent chronic illness from developing: eating healthy food, participating in physical activity and avoiding tobacco smoke. These good habits can prevent 80% of premature heart attacks, stroke and type 2 diabetes as well as 40% of cancers.

AHS does its best to keep the population in the North well and healthy in many ways. Be it through encouraging people to be more active, educating them on how to keep well or giving them the tools to take their health into their own hands, we reach out to as many people as possible through numerous initiatives and partnerships.

## BY PERFORMING **3** ACTIVITIES



## IT IS POSSIBLE TO PREVENT

**80%** of premature heart attacks, stroke and type 2 diabetes

**+**

**40%** of cancers

## MAKING HEALTHY CHOICES EASIER

As a health-promoting organisation, AHS sets out to be a positive role model in encouraging and motivating healthy habits. Our environment and physical infrastructure have been thoughtfully designed to facilitate an active lifestyle. For instance, an open promenade along the transformed Yishun Pond next to KTPH was custom-designed with a running track and incorporated with an exercise corner for the public and staff. The hospitals also hold healthy staff activities such as Zumba, line dancing and *tai chi* sessions in the promenade to openly promote the benefits of exercise.

In line with making an active lifestyle a way of life, both KTPH and YCH also provide bicycle racks to encourage staff to cycle to work. Messages to take the stairs, eat better and be mindful of one's weight are also integrated into the hospitals' design to nudge staff and public to adopt healthier choices.

AHS was also one of the first healthcare systems in Singapore to work with its food court operators to introduce a pricing scheme at its food court, which makes healthier food and beverages cheaper. The aim is to nudge consumers to reach for healthier options.

## OUR FIVE PILLARS OF HEALTH

Healthy living is all about making better decisions. AHS provides the right environment to make these choices easier for staff, patients and the community to achieve our five pillars of health.



### SCHOOL IS IN SESSION: MINI-MEDICAL SCHOOL @ KTPH

Knowledge is power and can empower one to make positive lifestyle changes, take charge of one's health and become advocates for wellness at home and in the community.

The Mini-Medical School (MMS) @ KTPH aims to improve the public's health literacy through informative and practical talks. The topics, ranging from emerging diseases and age-related illnesses to the management of chronic conditions, are presented in an easy-to-understand format by medical experts.

There were two runs of MMS @ KTPH in Financial Year 2015 – "Defying Gravity" and "TheatreWorks". "Defying Gravity" explored some key concerns of ageing such as weak



Interactive and informative talks at MMS @ KTPH help our residents improve their health literacy.

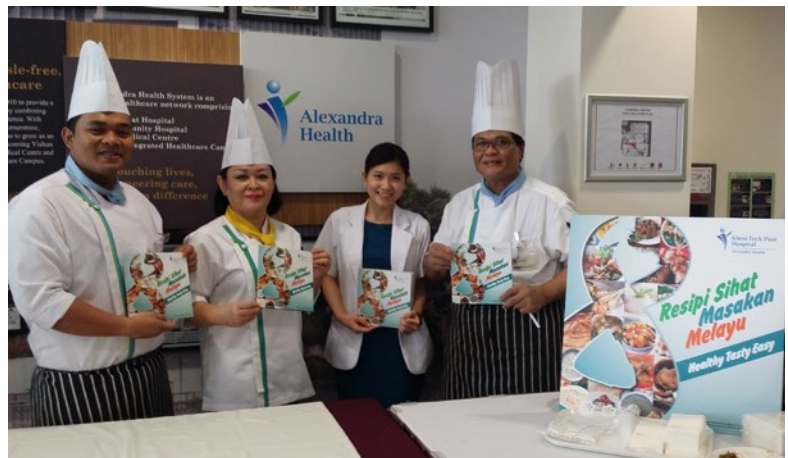
bones, teeth, bladders and fall risk, while “TheatreWorks” was a first-time collaboration with the KTPH Department of General Surgery to introduce basic surgery concepts and what patients should take note of before a surgery.

In all, eight sessions of MMS @ KTPH have been held since 2013, reaching out to over 1,211 participants.

## HEALTHY EATING STARTS AT HOME

To spread the message of healthy eating to homes, KTPH dietitians published an English/Malay bilingual cookbook titled *Resipi Sihat Masakan Melayu*.

The home-style recipes – developed in homage to simple kampong days – adds a healthy yet tasty spin to beloved Malay dishes. The book was launched at a Malay nutrition forum on 22 August 2015 where KTPH doctors, dietitians, physiotherapists and chefs highlighted health topics and gave advice on exercise and healthy cooking.



Helping our residents eat healthily through simple yet tasty recipes.

## CLEAN HANDS, SAVE LIVES

In commemoration of WHO's “Save Lives: Clean Your Hands” campaign, KTPH held a hand hygiene relay on 25 May 2015. Hand hygiene forms the bedrock of safety in the hospital setting and every healthcare professional performs an average of 8 to 30 hand washes or rubs during an hour of patient care. The right handwashing technique is as important as frequent handwashing.

Studies show that proper handwashing or rubbing may reduce the number of hospital-related infections by half.

In the area of infection control, the Ministry of Health commended KTPH for making significant and continuous improvements in healthcare-associated Methicillin-resistant *Staphylococcus aureus* bacteraemia rate from 2012 to 2015.



KTPH's energetic hand hygiene mascot went around the hospital to demonstrate the seven steps of handwashing.



Our gardening volunteers at work at KTPH rooftop garden.

## COMMUNITY HEALTH SCREENINGS

Since 2013, supported by funding from the Ministry of Health, AHS has run its pilot Population Health Programme in the North. This health partnership with People's Association and the Health Promotion Board rolls out health screening for residents, with the goal of screening a total of 16,500 residents by March 2017. The aim is to pick up those with risk factors and chronic diseases early, help them take responsibility for their health and manage their conditions well to prevent complications. The data collected will also help AHS understand the needs of the community and develop appropriate services to meet residents' needs.

As of 31 March 2016, we have screened a total of 10,670 residents.

## VOLUNTEERING AT KTPH

Our volunteers are an important part of the AHS family. They run programmes, offer friendship and give assistance to patients and visitors. They run the Inpatient Mobile Library, conduct Ageing-In-Place Home Visits together with our nursing team, lead in art therapy sessions, take part in our befriending initiative for stroke patients and are active contributors to our gardens. To date, we have grown our volunteer numbers to 36 and have 23 regular volunteer gardeners.

Many of our volunteer gardeners come at least three times a week – some as often as six times. Every Monday, Wednesday and Friday, these volunteers, who are mostly retirees, run a booth selling tropical produce from the KTPH rooftop garden.



Located beside Yishun Pond, the hospital has been designed to offer a healing environment for patients, staff and visitors while being environmentally sustainable.

### A HEALTHY, GREEN ENVIRONMENT

AHS believes in nurturing health in all aspects, including that of the environment. We go beyond complying with environmental legislation to create a green culture that aligns with our mission of health. Both KTPH and YCH have been strategically designed to offer a healthy environment for patients, staff and visitors. The buildings are also environmentally sustainable and integrate a wide range of energy- and water-efficient technologies.

Using passive design, technology, appropriate sizing and landscaping, the hospitals are able to use 36% less energy each year, lowering carbon emissions by 200 tonnes and saving over \$1 million in energy and water bills.

**Sustainable design:** The northeast-southwest orientation of the hospitals reduces exposure to direct sunlight and lowers the demand on cooling systems. The open spaces, large windows in the wards and location next to Yishun Pond also improve wind flow and provide natural ventilation.




We harness renewable energy through solar energy systems to help offset our carbon footprint.

**Efficient technology:** Throughout the hospitals, energy-efficient technology is used to reduce consumption while ensuring the comfort and safety of staff and patients.

- Air-conditioning units can be switched off independently to reduce energy waste.
- The carpark ventilation system is automatically turned off during low-use periods between 10pm and 7am, saving energy consumption by almost 40%.
- We have adopted efficient lighting in offices, carparks and other main areas.
- Sensor technology is used to activate escalators as well as lights in bathrooms and stairwells. In private single room wards, sensors detect when a window is open and automatically turn off the air conditioner. Sensors in our garden sprinkler systems also disable scheduled watering when they detect rain.
- Rooftop solar panels generate 21,000 litres of hot water daily for baths and washing up at kitchen areas.

**Cooling with nature:** With seven rooftop gardens, AHS is able to provide a lush healing environment, and reduce indoor temperature by one degree Celsius overall. This reduces the burden on air-conditioning systems. We also filter and pump out non-recirculated cold air from operating theatres into the gardens for additional cooling.

**Tapping NEWater:** To improve water efficiency, AHS incorporates the use of recycled and treated water (known as NEWater) as well as water from Yishun Pond for our cooling, sanitation and landscaping systems. This translates to saving over 70% of potable water use. In fact, only one third of total water usage at AHS is potable water, which is reserved for the wards, clinical work and human consumption. The rest of our water use is NEWater, and is mainly used for air-conditioner cooling towers and for flushing toilets. The condensation from the air handling units is in turn recovered and collected centrally, and then reused for watering our gardens.



I thought I was okay because I was at a healthy weight ... When I learnt that my cholesterol was high, I started to reflect on how I could improve my health.

Mr Chew Poh Kee, 49

● ● ●  
HIS STORY OF  
DRIVING POSITIVE  
CHANGE

### • Mr Chew Poh Kee

At a trim 65kg, Mr Chew is a picture of health. After suffering a mini stroke in 2003, the then-pudgy SMRT taxi driver was spurred into exercising. "I started by walking daily for 30 minutes, and increased the time as I grew fitter. When I felt ready, I started running," he shared.

After losing 17kg, he continued dedicating two hours a day to jogging, walking, swimming or climbing stairs. His active lifestyle led to a healthy Body Mass Index (BMI). So Mr Chew was surprised when a free health screening by AHS at the SMRT service centre revealed that he had high cholesterol. "I thought I was okay because I was at a healthy weight," he shared. "When I learnt that my cholesterol was high, I started to reflect on how I could improve my health. The nurse at the screening station gave me some good advice and I made some changes."

He now eats oatmeal twice a day, and has increased his vegetable intake while cutting out sugary and oily foods. These changes have reduced his cholesterol level to normal. He said, "I'm glad I found out about my condition so I could do something about it. I now encourage my taxi driver friends to go for screening too when they service their cars. It's convenient and free." "After all," the father of three noted, "we, as breadwinners, have to keep ourselves healthy for the sake of our families."

### DRIVING POSITIVE CHANGE

Not everyone is aware that they have a chronic disease or are at risk of developing one due to their lifestyle. It is estimated that 40% of the population in the North have an underlying chronic condition they are unaware of.

Health screening is important for disease prevention. This is because many chronic illnesses do not show symptoms in the early stages. Screening helps to sound alarm bells early. It also encourages people to take pre-emptive actions before their condition worsens into a chronic one. Spotting diseases early means treatment can be more effective.

Screenings also identify risk factors so that people can take steps to reduce them. Together with education and early treatment, they can manage and even reverse their conditions.

### BEYOND HEALTH SCREENING

At AHS, screening is just the first step. After the screening, we follow up with our residents to help them make sense of their results and take appropriate steps to manage their health. When residents collect their health screening results, they also attend a Group Health Report Review where anonymised results of their health screening are shared and interpreted. This allows the health talk to be contextualised and made relevant for them. The residents also learn about the risks associated with conditions like diabetes, obesity, high blood pressure and high cholesterol and how these in turn translate into risks of acquiring cardiovascular diseases. The talk also teaches residents about lifestyle changes that they can make to improve their health.

Last year, about 60% of the residents screened attended the bilingual sessions that were held at schools, void decks, other community spaces and at our hospital. Participants are also encouraged to sign up for some of our more intensive intervention programmes held in the community. Those who require medical follow-ups are encouraged to see their own primary care providers or polyclinics.

### HELPING THE UNHEALTHY BECOME HEALTHY

AHS has a number of outreach efforts that are targeted at people who were screened and found to be at risk of chronic diseases, such as obesity, high blood pressure and diabetes.

These include:

- Live! Programme, a health programme on chronic disease self-management;
- Skills for Life Programme, a series of diabetes management workshops;
- healthy eating seminars organised in collaboration with the Health Promotion Board (HPB); and
- collaborations with schools to spread health messages such as Greenwood Primary School's Gotong Royong Bus Project and Republic Polytechnic's Health Carnival.

### SCREEN-AS-YOU SERVICE

Since 2014, AHS, in collaboration with SMRT and HPB, has been running a preventive health screening and coaching programme at the SMRT Taxi Customer Service Centre. This is to make workplace health promotion more accessible for workers with non-traditional workplaces and shift hours.

The programme leverages on the time spent by the taxi drivers while they wait for their taxis to be serviced at the centre every 4–6 weeks. AHS nurses are stationed daily at the Centre to offer free health screening for chronic conditions such as high blood pressure, high cholesterol, diabetes and obesity.

Once screened, the drivers could, during their next visit to the service centre, have one-on-one health counselling with our nurses who will customise programmes to deal with any identified health conditions. In all, 1,925 taxi drivers have been screened under the programme.



An AHS community nurse taking Mr Chew Poh Kee's blood pressure at the SMRT Taxi Customer Service Centre.



A resident testing her functional reach at the Community Nurse Post.

## COMMUNITY NURSE POSTS

AHS nurses make their presence felt through our Community Nurse Posts in the northern community. They conduct health indicator surveys, geriatric assessments and provide blood pressure monitoring and blood glucose checks for residents. These posts are an integral part of AHS's effort to take its mission of health beyond the confines of the hospital.

## PREVENTING FALLS AMONG THE ELDERLY

More and more elderly residents are suffering from hip fractures due to falls that could have been prevented. Public hospitals in Singapore have seen the number of hip fractures among people aged 50 and older rise from 1,900 in 2004 to 2,500 in 2014, with half of them involving seniors aged



AHS community nurses at Community Nurse Posts conduct health checks and provide health advice for residents.

80 and above. Alarming, about half of those injured never recover fully, with some completely losing their mobility. Data also shows that the elderly who suffer falls have higher risk of depression and illness, and even live shorter lives.

To reduce the risk of falls, AHS, together with the Ministry of Health, launched a year-long Community Falls Prevention Programme in July 2015 for seniors aged 65 and above living in the North of Singapore. The programme has a simple three-question quiz that the elderly or their loved ones first answer to determine if they require further assessment. Those who answer “Yes” to any of the three questions, such as “Do you avoid going out because you are afraid of falling?”, are advised to talk to community nurses. The community nurses will assess the elderly person and give them advice on how to reduce their fall risk.

The programme is available at Community Nurse Posts in Sunlove Marsiling Senior Activity Centre, THK Chong Pang Social Service Hub, Woodlands Galaxy Community Club and Wellness Kampung @ 260 Nee Soon East.

## WEIGHT MANAGEMENT

At the KTPH Weight Management Clinic, we aim to help patients achieve sustainable weight loss for better health through our Weight Management Programme and Bariatric Surgery.

KTPH’s Weight Management Programme, the pioneer weight management programme in Singapore, was established at Alexandra Hospital in 2000. It is a 24-week programme that is designed to cater to individual patient’s needs, and to help them make positive lifestyle changes to achieve the best outcomes in terms of weight loss and sustainability.

A multidisciplinary team, comprising doctors, nurses, psychologists, dietitians, physiotherapists and occupational therapists, supports patients through their weight loss journey by assessing their health and providing tailored advice.



Bernice Tan (right), a research nurse, taking the height and weight for a patient in front of the BMI wall at KTPH’s Weight Management Clinic.

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Patients who are extremely obese, unable to lose weight with non-surgical means, or have metabolic diseases (e.g. diabetes) which cannot be controlled by conventional means are also offered the option of bariatric surgery. The more commonly performed operations in KTPH include sleeve gastrectomy, Roux-en-Y gastric bypass, biliopancreatic diversion and adjustable gastric bands. The KTPH Bariatric Surgery team has helped more than 600 patients manage obesity. The unit also has ongoing research projects relating to obesity and metabolic diseases.

## ENABLING HEALTH THROUGH PUBLIC ENGAGEMENT

To drive key health messages to the masses, AHS conducts a range of educational outreach programmes within

the hospital to educate people about heart failure, kidney health, weight management, colorectal cancer, age-related macular degeneration, foot care, diabetes and proper medication management.



Eye screenings were offered at over 50 locations as part of Age-related Macular Degeneration Awareness Week 2015.



Our dietitian introducing to the members of the public heart-healthy diet at the Heart Failure Awareness Day 2015.



Mr Louis Ng (centre), MP for Nee Soon GRC – Nee Soon East, and a participant learning about the signs of colorectal cancer from our staff at the "Beat Colorectal Cancer" public forum.



Participants learning how to take care of their feet through interactive games at Podiatry Day 2015.



I am grateful to my doctors, nurses and therapists at KTPH and YCH. They took good care of me and helped me get back on my feet.

Mr Heng Peng Swan, 65, with volunteers



# HIS STORY OF RECOVERY FROM TRAUMA

### • Mr Heng Peng Swan

In late 2015, Mr Heng was hit by a lorry and admitted to KTPH with severe injuries, including a badly broken right leg. It took some time before Mr Heng could get out of bed and he soon grew anxious about being discharged. "I kept asking when I could go home and back to work," he shared.

When he got better, Mr Heng was transferred to YCH to begin his rehabilitation. "I was impatient to walk again, but I knew I had to take things one step at a time," he recalled. His determination and diligence inspired his doctors, nurses and therapists. "You need to have the courage to push and get better," said the fiercely independent gentleman.

Concerned that he would grow bored and get depressed, his therapists suggested that he join an arts therapy group to take his mind off his long recovery. It was then that they discovered Mr Heng's artistic flair. Trained in fine arts as a teenager, Mr Heng also began to teach YCH's befrienders and volunteers to paint.

As the YCH team watched him regain his strength and mobility, they began to prepare Mr Heng for discharge. They assessed his home and neighbourhood for suitable social support while making arrangements for nursing services, rehabilitation sessions and follow-up appointments. Now back home and mobile, Mr Heng is grateful for the care he has received and gives back by volunteering at YCH once a week: teaching art to volunteers, drawing beautiful things and leaving a positive mark on those he meets.

## RECOVERING WELL

An estimated 25% of residents in the North fall into the unwell and unhealthy (early stage) category. Some of them, like Mr Heng, seek treatment for acute and urgent medical care. Others have existing chronic illnesses that are in their early stages or are well-controlled and require long-term management and care.

The care goals for those who require immediate or acute care are two-fold. Apart from treating the immediate medical problems and restoring health, AHS also aims to support patients in their journey to recovery. In addition to holistic care for trauma patients, AHS also has programmes to support recovery from stroke, hip fractures and various major surgeries. These include implementing services and support to help patients adapt to life after injury or illness so they can remain independent and live their lives to their fullest.

Our clinicians and nurses are constantly seeking to improve patient care, safety and satisfaction. We have explored innovative solutions to enhance our services to provide better, faster, safer and cost-effective care.

# AHS CARE CONTINUUM

Our integrated care pathway brings patients from acute to intermediate care and back home, in a safe and efficient manner.



## Patient is admitted to KTPH for an acute episode



During admission, the patient is assessed for suitability for community hospital



Once the patient's condition has stabilised, he will be transferred to YCH via the **link bridge**

## Patient undergoes rehabilitation in YCH



Decentralised gym in each rehabilitation ward enables **proactive rehabilitation**



Gardens linked to each rehabilitation ward provide a **healing environment**



Caregiver training



Communal area designed to feel like home, with TV, self-service snack kiosk and dining tables, encourages **interaction and independent living**



Art and music therapy

## Patient is discharged home with follow-up care



Multidisciplinary team from Ageing-In-Place Programme



Specialist Outpatient Clinic follow-up in KTPH



Community Nurse Posts and Wellness Kiosks

## YISHUN COMMUNITY HOSPITAL: A “WEL-GOING” HOSPITAL

The philosophy of care at YCH is to be a “wel-going” hospital that helps patients get well and go home as soon as possible. Both the environment and care have been designed to keep patients stimulated physically and mentally while preparing them to manage their health well. For instance, patients have a specially designed bedside cabinet for their medication to familiarise themselves with their own medication regimes.

Rehabilitation gyms, gardens, open spaces and communal dining areas are also located on every floor of YCH for easy access and to encourage interaction and movement. In addition, a varied daily programme of cooking demonstrations, arts and crafts, art therapy and games, keeps patients active and alert.

Our care does not end when our patients leave. To help them cope well, stay healthy, reduce complications and prevent re-admission, patients are carefully assessed when they are discharged. Those who need additional medical help and support are referred to the Ageing-In-Place (AIP) Programme (read about the AIP Programme on page 42).

## SMALL TOUCHES, BIG DIFFERENCE

Yishun Community Hospital has been designed to be elder-friendly and to promote independence, rehabilitation and recovery. Some of the small touches include:



### Communal Dining Areas

Communal dining areas encourage patients to eat their meals with family members and to socialise with other patients.



### Healing Environment

Gardens situated around the hospital, and on the link bridge between KTPH and YCH create a healing environment.



### Foldable Chairs

Foldable chairs are placed in the ward corridors for patients to rest if they are tired from their exercises.



### Reading Lights

Reading lights are placed above each bed to make it easier for patients who wish to read.



### Smart Remote

Each patient has a remote control device at the bedside that gives them the independence to control their reading lights, the speed of the fan overhead or to call the nurses when needed.



### Lockable Drawers

A lockable drawer is provided for patients to store and manage their medication under the supervision of a nurse. This ensures that they will know how to take their medication correctly when they go home.

## REDESIGNING CARE FOR ELDERLY SURGICAL PATIENTS

Elderly surgical patients are at higher risk of mortality and morbidity after major surgery, compared to younger surgical patients. This is due to comorbidities, functional disability and frailty. Therefore, they require multifaceted and coordinated care. The Geriatric Surgery Service (GSS) was initiated in 2007 by the KTPH General Surgery Department to care for this group of patients and help them recover well and without complications so that they can maintain quality of life.

The Start to Finish (STF) transinstitutional transdisciplinary model of care, offered under GSS, was developed to improve elderly surgical patients' functional outcome through prehabilitation and rehabilitation. Patients who are suitable for STF undergo two weeks of prehabilitation either at home or at a day care facility before the surgery. Prehabilitation involves pre-operative exercises, nutritional interventions and education to enhance a patient's functional capacity so that he or she can better withstand the stress of major surgery. Rehabilitation continues after surgery either at a outpatient clinic or at home.

A prospective study was also conducted by the Geriatric Surgery team to compare the surgical outcomes of those who were in the STF programme with a non-STF group. Patients who underwent major colorectal resection and were managed under GSS from January 2007 to December 2014 were included in this study. Published and presented in the *Colorectal Disease* journal in January 2016, the study illustrated the positive effect of prehabilitation and rehabilitation on elective colorectal surgery for frail elderly patients.

Frail patients under the STF transinstitutional transdisciplinary model of care had a significantly shorter hospital stay. All elective patients who received prehabilitation also achieved full functional recovery.

## START TO FINISH (STF) – A TRANSINSTITUTIONAL TRANSDISCIPLINARY MODEL OF CARE

Patient identified for STF model of care



Prehabilitation at home or at a day care facility



Exercises



Nutritional interventions



Education



Surgery



Post-op rehabilitation



## INTEGRATED CARE FOR STROKE PATIENTS

For a devastating illness such as stroke, medical treatment is not just about timely life-saving intervention to ensure survival, but rather long-term care for recovery. With this in mind, KTPH set up its Acute Stroke Unit (ASU) in 2013.

The integrated service is for patients who have suffered a semi-disabling stroke.

The multidisciplinary team delivers comprehensive, all-rounded specialised stroke care. Apart from assessing neurological and risk factors, the team also promotes early rehabilitation and discharge planning.

The unit identifies patients with good recovery potential and transfers them to YCH for rehabilitation. When patients are discharged, they are linked up with services to continue their rehabilitation at a day care centre or at home.

The goal is to reduce the damage of the first stroke, prevent future strokes, minimise complications and return patients to their pre-stroke independence as much as possible.

## SAFETY AND INDEPENDENCE AFTER A HIP FRACTURE

An ageing population and a related increase in the prevalence of osteoporosis have led to a rise in falls and hip fractures among the elderly. To prevent future falls and help the elderly regain their mobility, confidence and independence, KTPH established the Integrated Hip Fracture Care Unit in November 2014. The Unit provides coordinated team-based work that includes emergency nurses, anaesthetists, orthopaedic surgeons, geriatricians, physiotherapists and more.

The Unit addresses three areas:

- fall prevention, including screening for fall risk factors;
- integrated treatment of hip fractures from surgery through to recovery; and
- rehabilitation at YCH that begins soon after surgery to ensure the best chance for patients to regain mobility and independence.

## FASTER, SAFER, CHEAPER CATARACT SURGERY

Cataract surgery is a commonly performed procedure. The surgery is increasingly being done under topical rather than regional anaesthesia on suitable patients due to its faster post-operative recovery and elimination of anaesthetic injection complications. It also costs less as pre-operative diagnostic tests are not needed and has shorter pre-operative preparation time.

KTPH started two new care models to further improve care for cataract surgery under topical anaesthesia. One model involves trained nurses who provide pre-operative assessment at the Eye Clinic instead of doctors at the Anaesthesia Clinic. For the second model, trained nurses provide peri-operative and post-operative anaesthetic care under the supervision of an anaesthetist.

Overall, these two nurse-led care models have:

- freed up more time for the anaesthetist to handle more complex cases;
- trained and empowered the Day Surgery nurse (topical anaesthesia nurse) via a structured curriculum, protocol guidance and supervision;



New care models for cataract surgery have improved patient care and experience.

- eliminated potential complications from regional anaesthesia;
- decreased manpower cost by more than \$333,000 per year;
- reduced preparation time by over 66 hours in one year and increased operating theatre utilisation at KTPH's Day Surgery Centre;
- shortened appointment lead time for cataract surgery from 4–6 weeks to 2 weeks;
- saved each patient at least \$123 in fees per surgery; and
- saved each patient an additional visit to the Anaesthesia Clinic and \$77 for the pre-operative assessment visit.

### **STREAMLINING ACCESS TO UPPER GASTROINTESTINAL ENDOSCOPY**

KTPH has collaborated with polyclinics to improve patients' access to upper gastrointestinal endoscopy. The aim is to improve patients' waiting time and to reduce the number of specialist outpatient clinic (SOC) visits. An oesophagogastroduodenoscopy (OGD), an endoscopic procedure to examine the stomach, is performed to evaluate complaints such as gastric pain and acid reflux symptoms. Previously, patients needed a referral from the polyclinic to see a specialist at KTPH before the procedure could be performed.

This new workflow allows polyclinic doctors to book an OGD without referring the patient to the SOC, thereby reducing waiting times



Specialists at KPTH performing an upper gastrointestinal endoscopy.

and the number of SOC visits. All follow-up visits after the procedure are directed to the polyclinic instead of the SOC. Since its implementation in October 2014, this process has reduced the number of SOC visits by 316 and cut the average waiting time for an OGD from 40 days to just 14 days.

### REDUCING THE WAIT FOR MEDICATION

KPTH's pharmacy has cut down the waiting time for medication. Titled Capsule, this improvement project redesigned medication processing and bill collection at the Outpatient Pharmacy and eliminated multiple waiting points. Instead of having patients wait for their prescriptions and taking them to the pharmacy themselves, prescriptions are sent electronically from the clinic to the pharmacy for faster processing.

The new workflow reduces patients' waiting time and increases productivity at the pharmacy. Now, 79% of patients are able to collect their medication in under 30 minutes

compared to just 60% in the past. In addition, 22% collect their medication in under 10 minutes compared to 13% previously. Patient satisfaction levels also improved from 68% to 98%.

### ENHANCING HEALTH WITH ALEXANDRA HEALTH FUND

The Alexandra Health Fund Limited (AHFL) is a registered charity under the Charities Act with about \$122 million in endowment as of 31 March 2016. Since its incorporation in September 2014, AHFL has supported 11 major programmes directed at improving the quality of life of our patients through research, innovation and education. It has also funded various community outreach programmes for the benefit of the less fortunate. In the area of direct patient assistance, the Fund has benefited 350 needy individuals by providing them financial support in the form of home care needs, durable medical equipment and consumables, and medical treatment.



My diabetes care team at KTPH empowered me to take charge of my health and has continued to support me on my journey to health.

Ms Seren Chng, 34



# HER STORY OF COPING WELL

### • Ms Seren Chng

Diagnosed with diabetes at just 24, Seren had always struggled to keep her weight, diet and blood sugar in check. The constant worry about diabetes-related complications that might arise was an added burden. Thankfully, she had the support, encouragement and advice from her team of doctors, nurses and dietitians at KTPH, who helped her manage her condition as best as she could.

“Instead of nagging about my weight, my doctors and nurses focused on educating me and helped to come up with solutions to manage my blood sugar levels. They treated me as a person, not just an illness, and I felt supported and empowered,” she shared.

In 2015, Seren decided to take charge of her health and made the momentous decision to join a KTPH research study on bariatric surgery intervention for patients with diabetes (see page 39). Seren was selected for surgery to reduce her stomach size. “I was anxious about the operation but my doctor was very reassuring.”

Three months after the surgery, Seren was declared diabetes-free. She said, “I did not expect the results to be so dramatic and am grateful for my care team at KTPH for supporting me on my journey to health. I lost over 15kg and dropped three dress sizes.” Feeling lighter has also motivated and made it easier for Seren to exercise more. And now, aware of her tendencies to eat out of boredom or stress, she focuses on meeting her daily nutritional needs with healthier food choices.

## MANAGING CHRONIC DISEASES

Seren’s efforts to eat healthily and exercise more after her surgery show that chronic diseases like diabetes can be managed or even reversed with lifestyle changes.

Currently one in four Singaporeans above the age of 40 suffer from at least one chronic disease, be it diabetes, high blood pressure, high cholesterol or stroke. These have been nicknamed “lifestyle diseases” as lifestyle and habits such as poor diet, inactivity, excessive stress, smoking and higher obesity lead to risks of developing these diseases.

The increase in chronic lifestyle diseases has led to an increased burden on healthcare services, as well as a rise in disability and premature death. Between 2004 and 2010, the incidence of chronic diseases rose by 10%<sup>1</sup>. In tandem, the disability burden rose by 15% and premature mortality burden by 5%. Nearly 400,000 years of “healthy” life were lost due to premature deaths and ill-health in Singapore in 2010. This highlights the importance of not only preventing chronic illness but managing it well so that patients with existing chronic conditions can stay healthy, active and lead meaningful lives for as long as possible.

At AHS, we have developed a range of programmes that address the medical, functional, emotional and social aspects of chronic disease. These integrated and multidisciplinary care programmes are tailored to manage major illnesses of concern in Singapore, such as diabetes and dementia.

<sup>1</sup>Singapore Burden of Disease Study 2010. Available at: [https://www.moh.gov.sg/content/dam/moh\\_web/Publications/Reports/2014/Singapore%20Burden%20of%20Disease%20Study%202010%20Report\\_v3.pdf](https://www.moh.gov.sg/content/dam/moh_web/Publications/Reports/2014/Singapore%20Burden%20of%20Disease%20Study%202010%20Report_v3.pdf)



Our Diabetes team works together to provide the best care for patients.

## DIABETES CARE

### Managing diabetes as a team

Established in 2010, the KTPH Diabetes Centre supports and empowers persons with diabetes to manage their conditions well and to avoid complications. The team comprises doctors, advanced practice nurses, diabetes nurses, educators and allied health professionals such as podiatrists, pharmacists and dietitians. They work together with patients to address the different aspects of diabetes management. Apart from running clinics that monitor blood glucose levels, medication effectiveness and other medical issues, the Centre also has exercise, self-management and intensive insulin therapy programmes.

One of these is the Skills for Life Programme, which educates both persons with diabetes and the public on diabetes and self-management, shares tips on how to make lifestyle changes and illustrates

the effect of exercise on blood sugar. Participants meet fellow persons with diabetes who share how they cope well with their disease. The programme is conducted in English, Mandarin and Malay.

Another is the Diabetes Empowerment Programme, whereby the KTPH team reviews and assesses each patient to design a personalised nutrition, exercise and medication plan. Informal and small group learning sessions are also held to educate patients on caring for themselves, managing blood sugar and lowering stress levels.

Beyond these hospital-based programmes, the team also works closely with patients' family physicians to track progress and clinical outcomes. One critical team member of the KTPH Diabetes Centre, Ms Chelsea Law, Principal Podiatrist, received the PS21 Star Service Award 2015 for her outstanding service. The Centre also won the Star Service Team Award last year.

# HOLISTIC CARE FOR PERSONS WITH DIABETES

The Diabetes Centre at KTPH offers a one-stop service for persons with diabetes, covering various aspects of their health needs from diet to foot care. The Diabetes Team manages each patient using a multidisciplinary approach that enables patients to maximise their potential of leading healthy, active and productive lives.



### **First Asian weight-loss surgery trial for mildly obese persons with diabetes**

Studies have long shown that most morbidly obese persons with diabetes who undergo bariatric surgery see their blood sugar control dramatically improve. Some even reach normal levels after stopping their regular medicine. The surgery is not considered a cure because some people relapse, but others have remained in remission for years. In Singapore, bariatric surgery is offered to patients with a BMI of above 32.5 if they have obesity-related illnesses like diabetes.

In 2014, KTPH launched the first Asian initiative to study the effectiveness of conducting bariatric surgery on mildly obese patients with diabetes (BMI 27 to 32). Seren was one of the first 19 participants recruited for the landmark study.

Study participants were either given medication to manage their diabetes or underwent bariatric surgery to help them lose weight. Preliminary findings reveal that bariatric surgery could be a potentially effective treatment for obese persons with diabetes. While both groups showed improvement in their blood glucose levels and lost weight, the results were more significant for the group that underwent surgery.

The study, conducted by the Department of Surgery, Clinical Research Unit and Diabetes Centre, complements AHS's ongoing efforts to tackle diabetes from all sides: prevention, treatment and research. The research team is recruiting more volunteers for the study. Eligible participants must be aged between 21 and 65, have had type 2 Diabetes Mellitus for less than 10 years, and BMI between 27 and 32. Participants must be willing to undergo surgery or receive medical treatment.

## **DEMENTIA CARE**

### **Delivering person-centred care**

Dementia is becoming increasingly prevalent as Singapore's population ages. It is estimated that the disease affects 1 in 10 persons aged 60 years and above. By 2030, the number of dementia patients in Singapore is expected to double to some 103,000.

At AHS we understand that caring for dementia can be challenging and that care must go beyond the biomedical to include psychological and social aspects. This appreciation steers our person-centred philosophy of care for persons with dementia. In tailoring care and activity plans for patients, our multidisciplinary team considers their personal history, interests and background. This helps patients to engage better in therapeutic activities, bolster self-esteem, trigger positive emotions and improve quality of life. Apart from hospital-based care, the dementia care team also works with a wide range of community-based care centres to support patients and caregivers.

### **CAMIE Ward**

To improve care for persons with dementia, KTPH runs the only specialised inpatient dementia care unit in a tertiary acute care setting in Singapore. The 10-bed CAMIE (Care for the Mentally Infirm Elderly) Ward, opened in 2013, adopts person-centred care that prioritises the needs of each patient. The CAMIE Ward clocked a record 1,000 days of caring for patients without the use of physical restraints in February 2016.



The KTPH Memory Clinic runs a range of programmes for patients and their caregivers, including strength training exercises.

### Memory Clinic

Since it was established in 2010, the KTPH Memory Clinic has diagnosed and treated more than 2,000 patients with dementia. In addition, the Clinic runs structured activities to improve cognitive function and social engagement for those with dementia. These include enrichment programmes, such as drama and music therapy. The Clinic also trains staff and the public on dementia, dementia care and where to seek resources for support and expertise.

### The Forget Us Not initiative

This partnership between Lien Foundation and KTPH aims to build Singapore's first dementia-friendly community in Yishun where persons with dementia are respected, valued and supported. To help the community understand more about dementia, identify those with the condition, and interact with or assist them, training and educational talks were rolled out to over 6,000 people who live, work and study there. Booklets on dementia

were also distributed to 58,000 households and businesses. All this was part of an effort to foster stronger community support and create dementia-friendly communities. Apart from these educational talks, TV shows have also been produced to raise awareness of the condition.



Associate Professor Philip Yap, Director of Geriatric Centre and Senior Consultant, KTPH, speaking at the "New Dimensions of Dementia Care", a public forum on new care methods based on the Montessori concept, music therapy and the art of engagement.



I have not been hospitalised in months.

Mdm Ng Kim Huay, 69

● ● ●  
HER STORY OF  
AGEING IN PLACE

### • Mdm Ng Kim Huay

Mdm Ng used to be a frequent visitor to KTPH's emergency department and wards. Her heart, lung and kidney conditions caused intense pain in her legs and even led to a bad fall once. Today, home visits by community nurses under AHS's Ageing-In-Place (AIP) Programme have helped the elderly lady alleviate the swelling in her limbs, manage the pain and improve her ability to move around safely in her home and neighbourhood.

Apart from a community nurse who checks on her weight, blood sugar levels, blood pressure and pain, AHS occupational therapists and physiotherapists have visited her to check for fall risks, taught her how to use a walker and tapped the senior mobility fund to get her a motorised scooter. The AIP Programme also linked her with social and community services that have now become a supportive care network.

Today, Mdm Ng, who lives alone, entertains visits from community befrienders, enjoys daily nutritious meals delivered to her doorstep, and has a group of students who look in on her and do basic health checks. Instead of being hospitalised every three months, she has been "hospital-free" for almost a year. She also enjoys freedom of another sort: daily drives around her neighbourhood on her scooter. "It's much easier for me to move around, I don't have to use much strength. I can go to the coffeeshop and drive around the park downstairs every day," she said.

## COPING BETTER AT HOME

Mdm Ng belongs to the 5% of the population in the North who need greater attention and care to manage their multiple medical conditions. Many are repeatedly admitted when they are unable to cope with their illnesses at home.

Since 2010, AHS has been addressing this challenge and looking at ways to improve care for these patients with multiple, poorly-managed conditions or life-limiting illnesses. We recognise that they often require multiple interventions provided by different health professionals over the course of their illnesses. As a result, their care could be fragmented and even confusing, leading patients to overlook medication or appointments. This results in worsening conditions and the need for readmission.

Our experience tells us that medical needs typically constitute only 10% of a patient's health determinants, with over 60% of their health determined by social, behavioural and environmental factors. It is therefore important to also look at these factors when caring for patients with repeated admissions.

## THE AGEING-IN-PLACE (AIP) PROGRAMME

Our AIP Programme, first piloted in September 2011, ensures that patients who need additional support receive the help they need at home after they are discharged from the hospital. As part of the "de-medicalised" model of care, AIP community nurses visit patients at home to assess them and develop individualised care plans that address the patients' clinical, social and environmental needs. They are supported by allied health staff from AHS such as physiotherapists, pharmacists, dietitians, medical social workers, speech therapists and occupational therapists, working in collaboration with community partners in the North of Singapore.

Patients who qualify for AIP typically have:

- a history of three or more admissions over a six-month period;
- poorly-managed multiple chronic diseases; and
- medical as well as nursing, psycho-social, economic, functional and other needs.

In 2015, the AIP Programme was further improved to provide a more holistic service. It was combined with the medically-focused Transitional Care Programme with the aim to streamline the post-discharge care continuity. In addition, patients were stratified according to their care needs so that the geographically-based AIP Community Care Team can deliver targeted interventions for the patients. The team takes into consideration factors such as functional, nursing and psycho-social profiles, lifestyle habits, physical environment and economic circumstances. This ensures they deliver comprehensive, tailor-made care that is supported by specialists and community partners.

The holistic care framework sees the AIP Community Care Team working closely with more than 20 community partners such as voluntary welfare organisations, government bodies and grassroots organisations to take care of the range of needs for the patients. This care network helps patients maintain their health and independence, prevent complications from arising and minimise unnecessary readmissions. The AIP Programme has served more than 5,000 patients as of March 2016.

## ENGAGING THE YOUNGER GENERATION IN AIP

The Tri-Generational HomeCare @ North West is a joint initiative by students of the Medicine, Nursing, Pharmacy, and Social Work faculties of the National University of



AIP community nurse and students caring for AIP patient Mr Dengkel.

Singapore (NUS), North West Community Development Council (NWCDC) and our AIP team. It is supported by Thye Hua Kwan Family Service Centre (Bukit Panjang), Singapore Children's Society Family Service Centre (Yishun), Social Service Office @ Woodlands and TOUCH Community Services. Secondary school students within the North West District are also engaged in this initiative via the service-learning approach where they learn valuable caregiving skills during home visits to the elderly patients with the NUS students .

The AIP Community Care Team and the NWCDC train the NUS students on healthcare, caregiving and befriending skills so that they can complement existing nurse visits with their home visits. At the start and end of each cycle, students present their plans and assessments, respectively, to a multidisciplinary team from AHS consisting of geriatricians, nurses, medical social workers, pharmacists and rehabilitation therapists. As of March 2016,



Regulars at Wellness Kampung Mdm Salimah and Mdm Zauridah have made the morning exercise session part of their daily routine.

the programme has involved 184 NUS students and 240 secondary school students from West Spring, Woodlands and Yishun Secondary Schools.


### A HUB FOR WELLNESS IN THE COMMUNITY

To help the community age well in place and provide a hub for residents to come together for healthy activities, AHS started three Wellness Kampung. These centres – a collaboration between AHS, St Luke's Elder Care and Nee Soon grassroots organisations – offer a wide range of programmes for people of all ages. Residents can drop by for daily morning exercise classes, interact with neighbours and friends, participate in games, do arts and crafts, and learn from weekly healthy cooking demonstrations. Yishun residents Mdm Salimah Binte Abdullah, 52, and Mdm Zauridah Binte Suboh, 42, visit the Wellness Kampung @ 765 Nee Soon Central every morning after dropping their children

off at school. Both enjoy working out with the friends they have made at the centre. They also participate in other activities such as healthy cooking demonstrations, health talks and festive gatherings. These active lifestyle programmes provide residents with the opportunity for social bonding and support the holistic well-being for the mind, body and spirit. The centres also act as a health resource hub for the community.



Ground up effort: residents lead the healthy cooking demonstration and share recipes with their neighbours.



Palliative care helped us say  
goodbye and fulfil my husband's  
wish to end his life's journey with  
dignity and comfort at home.

Mdm Tan Yee Hwa, wife of the late  
Mr Ong See Kong (1955 to 2016)

● ● ●  
HER STORY OF  
FULFILLING LAST WISHES

• **Mdm Tan Yee Hwa, wife of the late Mr Ong See Kong (1955 to 2016)**

When Mr Ong See Kong was diagnosed with late stage pancreatic cancer in 2015, the world seemed to collapse for him and his family. As the disease progressed, so did the pain. Seeking to alleviate it, his son raised the idea of pursuing palliative care. But Mr Ong's wife, Mdm Tan Yee Hwa, resisted the idea, "It felt like I was giving up on my husband."

However, a better understanding of the care approach changed her mind. "The team of doctors and nurses were very understanding, warm and supportive; it made us feel like they knew what we were going through. They managed my husband's pain and helped him have comfort, dignity and quality of life in his remaining time with us."

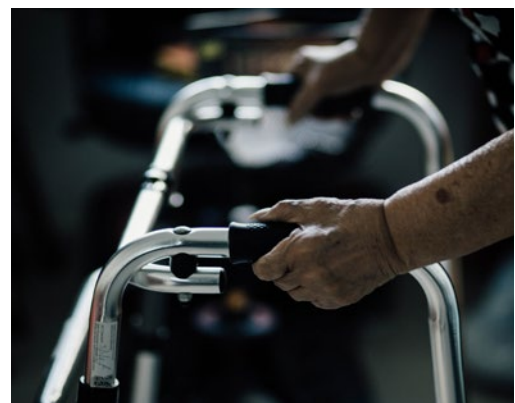
The palliative care service also supported the family in bringing Mr Ong home and linking them with the necessary services and equipment. This allowed him to live out the remainder of his days at home as he wished. "They prepared him, and the family, for the end. Palliative care helped us say goodbye and fulfil my husband's wish to end his life's journey with dignity and comfort at home," said Mdm Tan.

## FULFILLING LAST WISHES

Coming to terms with terminal illness is never easy for the patient or his family members. This is when palliative care comes in. It is a holistic branch of medicine that seeks to alleviate pain and discomfort during the final stages of life-limiting illnesses when curative treatments no longer work. For Mr Ong, the attentive care and support from KTPH's Palliative Care Service helped him live his last days with dignity, and in the comfort of his own home.

KTPH's Palliative Care Service, which comes under the Department of Geriatric Medicine, provides inpatient and outpatient care. Palliative Care Service provides relief from the symptoms, pain, physical and mental stress that arise from any serious illness. It serves the 1% to 2% of the population in the North with life-limiting conditions or advanced progressive illnesses that require pain management and nursing care.

The team of doctors, nurses and allied health professionals works closely to maintain the highest possible quality of life for frail patients and those facing advanced progressive illnesses.



Many patients we help are frail elderly with multiple medical conditions, who are living out the last 1,000 days of their lives.

The care goes beyond attending physical needs to include psychological and spiritual support when needed. It also supports family members by equipping them with caregiving and coping skills to become confident and effective caregivers.

The service also collaborates with KTPH's Ageing-In-Place Programme. In addition, it works closely with home hospice care organisations such as HCA Hospice Care, Singapore Cancer Society's home hospice section, AIC HOME (HOListic care for MEDical advanced patients) and Agape Methodist Hospice (Homecare) to provide comprehensive end-of-life care for patients at home.

## MAKING PLANS FOR END OF LIFE

One aspect of care is Advance Care Planning (ACP). This is an ongoing conversation between the patient, his or her family members and healthcare professionals about the patient's future healthcare plans. The goal is to understand the patient's wishes and reduce crisis decision-making for family members. The discussions help to safeguard patients' best interests by ensuring medical decisions are made in accordance to their wishes.

KTPH's ACP Clinic was established in September 2013. A trained facilitator initiates the conversation at an appropriate



Planning end-of-life care with Advance Care Planning.

stage of a patient’s illness. In the conversation, the facilitator seeks to understand and document the patient’s personal values and beliefs, care preferences and what it means to live well. He or she may discuss with the patient on the nomination of a Nominated Healthcare Spokesperson. The ACP team provides

training to equip hospital staff and community partners with the required knowledge to become ACP advocates and facilitators.

In Financial Year 2015, the number of patients or families who completed ACP increased by 32% to 369 compared to 279 in Financial Year 2014.



## ADVANCE CARE PLANNING

Talking about end-of-life issues can be difficult. We train our staff and volunteers to become ACP advocates and facilitators.

In Financial Year 2015, we had:

17

**ACP advocacy courses for facilitators and advocates**

88

**New ACP facilitators**

ACP facilitators are individuals who are equipped with skills to go through the ACP discussion, assess patients’ decision-making abilities and document ACP for patients.

947

**New ACP advocates**

ACP advocates are individuals who introduce ACP to patients and families.

### New ACP e-Learning Course

The e-Learning module for ACP advocacy was launched for staff who were unable to participate in the ACP advocacy courses.

**731** staff participated

# OUR PEOPLE: THE HEART OF AHS



Even as we grow our services and expand our healthcare network infrastructure, we are well aware that our staff hold the key to delivering the best service for our residents. Thus, AHS has committed to building talent and attracting staff to join us on our journey of transforming healthcare in the North. We have focused on selecting and grooming the people with both the aptitude and attitude for serving others. We actively engage staff to inculcate a culture of lifelong learning and quest for excellence.

### ATTRACTING TALENT TO GROW OUR FAMILY

We increased the focus on attracting the right talent over the past year with 160 scholarships and sponsorships – 40% more than the previous financial year. In Financial Year 2015, AHS also grew its manpower by 15% as we built our regional health ecosystem.

### LEARNING AT WORK

Learning is an ongoing affair at AHS, be it to improve the way we work or to improve ourselves.

New and revised core corporate courses conducted last year included:

- **Level Two Conflict Resolution Course** for security officers to upgrade their skills in effectively defusing and de-escalating conflict situations; and
- **Acculturation Course** for foreign employees which includes a city tour to introduce local sights and foods.

AHS also holds regular talks for staff. These include monthly clinical forums and clinicopathological lectures to help our staff keep up to date with developments in medical science.

Weekly sharing of book reviews and talks on topical subjects, such as financial literacy, emotional health, and family and parenting skills, keep staff abreast of general knowledge.

### ADVOCATES OF HEALTH

Our Five Pillars of Health inspire a wide range of wellness and work-life initiatives that help staff strike a healthy balance between work and play.

#### Sports and Social Interest Groups

Our 12 sports and social interest groups bring together staff from different departments to share their interests and passion. The sports groups gather weekly to take part in sports including soccer, badminton, bowling, table tennis and *tai chi*. Some of these teams have taken part in external competitions. We also hold regular meet-ups for bird-watching, photography and performing arts for staff to develop their skills in these hobbies. These have helped to build a healthy and happy AHS family.

#### Inter-department Games and Group Exercise

To nurture sportsmanship and teamwork, AHS introduced sporting competitions and group exercise programmes. Termed the "AHS League", the inter-department games in badminton, bowling, Captain's Ball, futsal and tchoukball has fostered bonding within departments and strengthened camaraderie across the organisation. Group exercises, such as Bouncefit, kickboxing, line dancing, Piloxing, yoga and Zumba, are held in the hospital grounds after work hours. These provide staff with opportunities to learn and participate in new types of exercises, enabling them to keep fit in a convenient manner.



AHS departments competing with each other in basketball.



Staff who were new to tchoukball attended tchoukball clinics before competing in the inter-department games.



Members of the Soccer Sports Interest Group took part in the inaugural Renal Community Games organised by the National Kidney Foundation and clinched first place at the futsal tournament.

## A HAPPY FAMILY, A PRODUCTIVE COMPANY

### AHS's Extended Family

A happy organisation extends beyond its walls. We hold regular excursions that bring AHS staff and their families together on trips to places like Pulau Ubin and Desaru. Besides excursions, Family Day is an anticipated yearly event where staff bring their families along for a time of mingling, fun and games.

### Celebrations

Our festive celebrations bring staff and volunteers together as one family. Amongst the celebrations organised are those to mark Chinese New Year, Hari Raya, Deepavali, Christmas and National Day, which nurture an appreciation of diverse cultures and backgrounds. We also recognise and appreciate staff for their contribution through Nurses' Day, S.T.A.R.S. (Showing Thanks, Appreciation, Respect to Staff) Day, and our annual Dinner and Dance.



Colleagues and their families bonding with each other during excursions to Desaru (left) and Pulau Ubin (right)



Promoting better understanding of the different cultures and tradition through festive celebrations such as Deepavali.



Giving recognition to our nurses during Nurses' Day celebrations.



Our speech therapists brought residents of Villa Francis Home on an excursion to Gardens by the Bay as part of Speech Therapy Day.

## CONTRIBUTING TO OUR COMMUNITY

AHS gives back to the community through various corporate and social responsibility programmes.

One of these was our participation in The Purple Parade 2015. AHS staff came together to sell 60 terrariums, 1,000 curry puffs and 500 pieces of local *kuah* in just two hours to support and raise funds for persons with special needs.

With our medical expertise, AHS also sent volunteers to support sporting events such as the 2015 SEA Games and ASEAN Para Games.

In a bid to streamline the organisation of overseas disaster relief missions, Mission ATHENA (AHS Team for Humanitarian

Emergencies & National Assistance) was established in May 2015 to provide sustainable medical humanitarian support by AHS institutions.



Our staff supported persons with special needs at The Purple Parade 2015.

# Operational Highlights

For the year ended 31 March 2016

## KTPH

Beds in Service



**659**

▲ 12% from 591

A&E Attendances



**132,171**

▲ 1% from 130,811

Bed Occupancy



**96%**

▲ 1% from 95%

Inpatient Admissions



**35,869**

▲ 7% from 33,569

Total Inpatient Days



**207,526**

▲ 2% from 202,821

Surgeries



**49,893**

▲ 9% from 45,784

Average Length of Stay



**5.6**

Unchanged

Day Surgery



**34,736**

▲ 11% from 31,327

Outpatient Attendances



**385,418**

▲ 6% from 365,014

Inpatient Surgery



**15,157**

▲ 5% from 14,457

## YCH

Beds in Service



**170**

Total Inpatient Days



**5,994**

Average Length of Stay



**23.5**

Inpatient Admissions



**346**

# Awards

## PS21 Excellence in Public Service Awards 2015

- PS21 Star Service Team Award:  
KTPH Diabetes Centre
- Star Service Award:  
Ms Chelsea Law, Principal Podiatrist, KTPH

## The Singapore HR Awards 2015

- Manpower Resourcing & Planning (Special Mention):  
AHS
- Lifelong Learning (Special Mention):  
AHS
- Quality Worklife, Physical & Mental Well-Being (Leading):  
AHS
- Leading CEO:  
Mrs Chew Kwee Tiang, CEO, KTPH

## NTUC May Day Model Partnership Award (Management Category)

- Housing & Development Board (HDB)  
Partners: HDB Staff Union and KTPH
- AHS  
Partner: Healthcare Services Employees' Union
- National Trades Union Congress  
Partner: AHS

## The PUB Watermark Award 2015

- AHS

## People's Association Community Spirit Award 2015

- Merit Award:  
AHS

**"Best Companies for Mums"** contest by NTUC Women's Development Secretariat in partnership with the Tripartite Alliance for Fair and Progressive Employment Practices

- "Best Empowering Company for Mums":  
KTPH

## National Day Awards 2015

- The Public Administration Medal (Silver):  
Ms Low Beng Hoi, Chief Nurse, AHS
- The Commendation Medal:  
Mr Muhammad Yasin Bin Abu Bakar,  
Senior Principal Radiographer, Diagnostic Radiology,  
KTPH
- The Efficiency Medal:  
Ms Chew Pei Kiang, Senior Nurse Educator, KTPH  
Mr Halid Bin Shehad, Senior Patient Relations  
Associate, Security, KTPH
- The Long Service Medal:  
Dr Chin Thaim Wai, Senior Consultant,  
Orthopaedic Surgery, KTPH  
Ms Chin Guey Fong, Senior Nurse Clinician, KTPH

## Healthcare Humanity Awards 2015

- Dr Chan Keen Loong, Head of Department and  
Senior Consultant, Psychological Medicine, KTPH
- Dr Tan T'zu-Jen, Senior Consultant, General Surgery,  
KTPH

## President's Award for Nurses 2015

- Ms Velusamy Poomkothammal,  
Assistant Director of Nursing, KTPH

## MOH Nurses' Merit Award 2015

- Ms Chew Pei Kiang, Senior Nurse Educator, KTPH
- Ms Yvonne Yap, Nurse Manager, KTPH
- Ms Annie Pah, Nurse Manager, KTPH
- Ms Guo Hui, Nurse Manager, KTPH
- Ms Tan Soh Choo, Principal Assistant Nurse, KTPH
- Ms Ong Yu Jing, Senior Staff Nurse, KTPH

**Young IR Best Case Award 2015** by the Singapore Congress of Radiology 2016

- First Prize:  
Dr Raymond Chung, Consultant, Diagnostic Radiology,  
KTPH

# Alexandra Health System

Alexandra Health System is a regional healthcare system established on 1 April 2008 to take care of 800,000 residents living in northern Singapore.

Our goal is to make a difference to the population in the North by working together with our partners and empowering the community and residents to manage their health for life.



## Khoo Teck Puat Hospital

Opened in June 2010, KTPH is a 590-bed general and acute care hospital which combines medical expertise with high standards of care, set within a healing environment.



## Yishun Community Hospital

Opened in December 2015, YCH is a 428-bed community hospital which will cater to the sub-acute and rehabilitation needs of patients.



## Woodlands Integrated Health Campus

Opening in stages from 2022, WIHC will comprise a large acute care hospital, a community hospital, a nursing home and other associated facilities and services.



## Admiralty Medical Centre

Located in Kampung Admiralty, AdMC will be a one-stop diagnostic and treatment centre, providing outpatient specialist services when it opens in 2017.



## Sembawang Primary Care Centre

Located in Sembawang Community Hub, SPCC will be integrated with a sports complex and a hawker centre to provide a one-stop service for residents.





## Alexandra Health

90 Yishun Central Singapore 768828  
[www.alexandrahealth.com.sg](http://www.alexandrahealth.com.sg)

Khoo Teck Puat Hospital | Yishun Community Hospital | Woodlands Integrated Health Campus  
Admiralty Medical Centre | Sembawang Primary Care Centre

*Touching Lives, Pioneering Care, Making a Difference*