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## **MEDIA RELEASE**

### **For immediate release**

## **JurongHealth takes its nurses to construction site of future Ng Teng Fong General Hospital and Jurong Community Hospital to celebrate Nurses' Day!**

*Special excursion for nurses and staff to have an up-close view of the on-going construction of the future hospitals, and be the first to walk through life-sized mock-ups of eight patient areas.*

Graced by Health Minister Gan Kim Yong, Jurong Health Services (JurongHealth), Singapore's public healthcare cluster for the West, kick-started its Nurses Day celebrations 2011 at the site office of the future 700-bed Ng Teng Fong General Hospital (NTFGH) and 286-bed Jurong Community Hospital (JCH) today.

Themed **Build. Bond. Bridge @ JurongHealth**, the event was held at this unique venue as a tribute to the contributions of JurongHealth's nurses as well as to celebrate the "on-track" progress in the sub-structure work of the future NTFGH and JCH.

### **Defining the Hospital Design**

As a special treat, access to the site office of the NTFGH and JCH construction site has been opened up to JurongHealth's nurses, staff and guests to have an up-close view of the construction work that is well underway and to walk through life-sized mock-ups of eight key patient areas such as Accident & Emergency, Operating Theatre, Intensive Care Unit, High Dependency Unit, Isolation Room, A/B/C-class Wards and Consult Rooms.

As part of the on-going hospital planning process, the life-sized mock-ups of these key areas have been replicated over a floor area of 800 sqm at the site office to facilitate detailed spatial planning. The nurses were among the first to experience, assess and verify the spatial quality of each of these areas and to provide feedback.

In addition to the nurses, a series of workshops will be planned for the various hospital planning workgroups to conduct detailed review of these areas. JurongHealth's Patient Feedback Lunch, an on-going patient engagement initiative mooted in Alexandra Hospital (AH) by the team, will also be conducted at the mock-up zone to allow the patients a sneak preview of the new hospitals and the opportunity to provide feedback from the patients' perspectives.

Said Mr Foo Hee Jug, Chief Executive Officer of JurongHealth, “JurongHealth has the unique opportunity in healthcare to start on a clean slate and be the catalyst for new and better ways to integrate care. Starting anew with an experienced team who is as excited to pioneer new possibilities, we have the chance to re-imagine, design and build a truly patient-centred hospital and in the process, make navigating around the healthcare system a fuss-free experience.”

He added, “In planning a patient-centred hospital, our nurses have proven to be our best resources. They have been intensely involved in the design of our future hospitals, working closely with colleagues from different departments. Their feedback on space planning of clinical areas such as our wards, clinics and operating theatres, have been invaluable as they also represent the voice of patients with their extensive contacts with patients.”

### **Nurturing Future Nursing Leaders**

From a team of 400 nurses only a year ago to the current strength of 640, JurongHealth nurses defines the pioneering spirit of JurongHealth with a collective aspiration to shape and transform patient care.

As a newly formed healthcare cluster, nurturing talents and grooming future nursing leaders is a key priority. JurongHealth has since introduced two new positions of **Assistant Nurse Clinician** and **Assistant Nurse Educator** to provide a more dynamic career progression for its nursing force, which is expected to expand to 1,400 when NTFGH and JCH open their doors progressively from 2014.

Said Mdm Kuttiammal Sundarasan, Director of Nursing at AH and NTFGH, “The nursing team has grown from strength to strength in the past year. The team has settled in well in our base at AH. These nurses have taken the leap of faith to join a start-up and have found immense satisfaction in their involvement in hospital planning projects. Shaping the right culture and building a hassle-free hospital for patients are just some of the many unique opportunities we offer at JurongHealth. We are committed to roll out even more innovative schemes and initiatives to develop and nurture our pool of nurses to further elevate the nursing profession.”

In conjunction with Nurses’ Day celebrations, the occasion also marked JurongHealth’s first anniversary in managing AH since 1 August 2011.

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**About Jurong Health Services**

Jurong Health Services (JurongHealth) is Singapore's public healthcare cluster formed to facilitate the integration of services and care processes within the hospital and across the community to better serve the healthcare needs in the West.

**About Ng Teng Fong General Hospital and Jurong Community Hospital**

JurongHealth is building the 700-bed Ng Teng Fong General Hospital, which will be twinned with the 286-bed Jurong Community Hospital to provide holistic care for patients. Slated for completion from 2014, the hospitals will form an integral part of the Jurong Lakeside District Masterplan, with easy access to public transport services (Jurong East MRT Station, Jurong East Bus Interchange) and retail/entertainment hubs. Working with partners such as healthcare providers like General Practitioners, polyclinics, community hospitals, long term care providers and voluntary welfare associations, we aim to bring health and wellness one step closer to home.

JurongHealth is currently operating Alexandra Hospital, a 400-bed acute general care hospital, till 2014 when the new hospitals are ready in the West. From our base at Alexandra Hospital, we offer patients a comprehensive range of clinical services in a tranquil and healing environment including Orthopaedic Surgery, General Surgery, Urology, Dental, Eye, ENT, Cardiology, Respiratory Medicine, Geriatrics, Endocrinology, General Medicine, Nursing and Allied Health.

**[www.juronghealth.com.sg](http://www.juronghealth.com.sg)**

## **Annex A: Quick Facts about NTFGH and JCH**

Site Location	Located in the heart of the Jurong Lakeside District, the site is situated along Jurong East Street 21. It is within easy access for the public in the West and will be connected to amenities such as the Jurong East MRT station, bus interchange, retail and business complexes.
Site Area	54,144m <sup>2</sup> <ul style="list-style-type: none"> <li>• NTFGH (Inpatient) and JCH sites: 34,404 m<sup>2</sup></li> <li>• NTFGYH (Specialist Outpatient Clinics or SOC) site: 19,740 m<sup>2</sup></li> </ul>
Completion Target	Year 2014 for NTFGH. Early Year 2015 for JCH
Massing	<ul style="list-style-type: none"> <li>• 8-storey (SOC)</li> <li>• 16-storey JGH (Inpatient) including 12-storey Subsidised Ward Tower and 6-storey Private Ward Tower over 4 storey Podium</li> <li>• 9-storey JCH</li> <li>• 2 Basements</li> <li>• Approximately 800 car park lots at levels B1 and B2</li> </ul>
Entry	<ul style="list-style-type: none"> <li>• Dedicated vehicle drop off/pick up and carpark entry/exit for NTFGH (SOC) block, NTFGH (Inpatient) and JCH from Jurong East Street 21</li> <li>• Shuttle bus drop off/pick up points at NTFGH (SOC) and NTFGH (Inpatient) blocks from Jurong East Street 21</li> <li>• A&amp;E (walk in) has a dedicated drop-off driveway</li> <li>• A&amp;E ambulance from Boon Lay Way</li> <li>• Separated service road entry from Jurong East Street 21</li> <li>•</li> </ul>
Total Beds	<p>NTFGH (Inpatient): 700</p> <ul style="list-style-type: none"> <li>• 142 Private - A1/ B1 Class including one Deluxe Suite</li> <li>• 432 Subsidised - B2/C Class</li> <li>• 28 Intensive Care Units</li> <li>• 42 High Dependency Units</li> <li>• 56 Isolation Beds</li> </ul> <p>JCH: 286</p> <ul style="list-style-type: none"> <li>• 30 Private - A1/ B1 Class</li> <li>• 240 Subsidised - B2/C Class</li> <li>• 16 Isolation Beds</li> </ul>
Specialist Outpatient Clinics (SOC)	<ul style="list-style-type: none"> <li>• 30 Clinics and 120 Consult Rooms</li> <li>• Training Centre</li> <li>• Auditorium</li> <li>• Diagnostic Services</li> </ul>
Medical Services	<p>NTFGH</p> <ul style="list-style-type: none"> <li>• Musculo-Skeletal/ Orthopedics and Sports Medicine</li> <li>• General Medicine</li> <li>• General Surgery</li> <li>• Cardiology</li> <li>• Oncology and Radiation Therapy</li> <li>• Urology</li> </ul>

	<ul style="list-style-type: none"> <li>• Geriatrics</li> <li>• Diabetics</li> <li>• Eye</li> <li>• Ear, Nose and Throat (ENT)</li> <li>• Dental</li> <li>• Rehabilitation and Allied Health</li> <li>• Diagnostic and Interventional Radiology</li> <li>• Nuclear Medicine</li> <li>• Health &amp; Wellness Centre</li> </ul> <p>JCH</p> <ul style="list-style-type: none"> <li>• Rehabilitation and Allied Health</li> <li>• Geriatrics</li> <li>• Dementia</li> </ul>
Operating Theatres (OT)	<p>8 Major OTs at Level 3 of JGH Podium</p> <ul style="list-style-type: none"> <li>• 6 Operating Theatres</li> <li>• 1 Isolation / Septic OT</li> <li>• 1 Robotic OT</li> </ul>
Day Surgery	10 Day Surgery Operating Rooms at Level 3 of NTFGH
Endoscopy Suites	4 Endoscopy Suites at Level 3 of NTFGH
Training Centre	<ul style="list-style-type: none"> <li>• 300-seat Auditorium</li> <li>• 100-seat Lecture Room</li> <li>• 7 Training Rooms for 25 to 50 persons each</li> <li>• Surgical Skills Lab</li> </ul>
Staff Facilities	Lounge; Games Room; Gymnasium; Aerobics Studio; Staff Library; Mother's Suite; Reading Area; Child Care Centre
Food Court & Cafeteria	<ul style="list-style-type: none"> <li>• Cafeteria on Level 2 of JGH (Inpatient)</li> <li>• Refreshment corners at Level 1 of NTFGH (Inpatient); Level 2 of NTFGH (SOC) atrium and other retail areas at NTFGH (SOC)</li> </ul>
Garden	<p>Level 1</p> <ul style="list-style-type: none"> <li>• Community Wellness Park - including Multi-purpose open lawn, informal Amphitheatre, Multi-Sport Court, event and lunch Plaza, jogging trail</li> <li>• JCH Pre-function Patio</li> <li>• Mobility and Road Safety Park</li> <li>• "Jelutong" Walk</li> <li>• Roof top gardens at Level 3 of NTFGH (SOC), Level 3 of JCH and Level 4 of NTFGH (Inpatient)</li> </ul>
Other amenities	<ul style="list-style-type: none"> <li>• Handicapped-Family-friendly restrooms</li> <li>• Retail Facilities</li> </ul>

## **Annex B: Fundamental Design Principles**

### **Siting Rationale**

Taking advantage of the linear plot of land which is separated by the Jurong Gateway Road, the NTFGH (Inpatient) and JCH will be sited on the larger plot while the NTFGH (Specialist Outpatient Clinics) will be on the smaller plot.

### **Separation of pedestrian and vehicular traffic**

The division of the plot provides the opportunity to segregate pedestrian and vehicular traffic, while at the same time create a natural infection control barrier between the ambulatory zone comprising NTFGH (SOC) and the rest of the hospitals comprising the NTFGH (Inpatient) and JCH. As patient and visitor traffic volume is expected to be the highest for the clinics, locating the NTFGH (SOC) nearest to the MRT will increase convenience and provide easy access to the hospital for patients and the public at level 2. Vehicular traffic would be at level 1 and basements 1 and 2.

### **Connectivity and enhancing infection control**

All three buildings will be connected via link bridges where pedestrian traffic will be directed to Level 2; patient traffic and hospital personnel traffic to Level 3. This allows for easy, convenient and safe access for patients and visitors moving within the buildings. The dedicated access for patients ensures privacy in the hassle-free patient transfer from NTFGH (Inpatient) to JCH or patient flow from NTFGH (Inpatient) and the NTFGH (SOC).

### **Synergy in operations**

Hospital backend and logistics functions will be co-located at Basement Level 2 to optimise transport via Automated Guided Vehicles (AGVs) and efficient consolidation of goods for distribution. Other services will be also be consolidated for operational efficiency and synergy. For example, the two hospitals will be wired up for IT connectivity and RFID tracking. Plans are in place for adjacency of common services such as Digital Imaging, kitchen, pharmacy and warehouse. The proximity of the Accident & Emergency Department (A&E) to JCH can also facilitate direct admission of patients who require only sub-acute care to the JCH in future.

### **Vertical and horizontal adjacencies**

#### **A&E and Isolation Ward**

Patients who arrive at the A&E and require isolation can be easily transferred to the adjacent isolation ward. This arrangement decreases the risk of contaminating general areas as compared to designs where the isolation ward is located away from A&E.

#### **A&E and Diagnostic Imaging**

Strategic placement of vital resources such as the X-rays, CT scans and MRIs adjacent to A&E allows for A&E to tap on these shared resources as variation in patient volume may demand.

#### **Main Operating Theatres and Day Surgery Operating Theatres (OT)**

Co-location of Major and Day Surgery OTs on one common Integrated Interventional Platform allows resource sharing as well as flexibility to vary usage.

#### **Intensive Care Units (ICU) and High Dependency Wards (HD)**

Clustering the ICU and HD patients on the same level allows better utilization of staff and resources; as well as promotes the latest trends towards co-management of intensive care patients and flexibility of sharing of intensive care capacity among all disciplines.

## **Inpatient Rehabilitation and General Ward**

The orthopaedic ward and inpatient rehabilitation department will be strategically co-located at Level 11 to facilitate ease of patient movement.

## **Trauma Lifts**

The OT and ICU located on levels 3 and 4 will be connected by specially-sized and equipped Trauma Lifts. These lifts will also link both levels with the A&E located on Level 1. This dedicated pair of lifts will allow the patient on a bed to fit comfortably with two staff and resuscitation equipment. Standby equipment and staff will also be planned to ensure quick recovery of lift function or the rescue of trapped patients in the event of a breakdown. Such connectivity is now standard in many renowned hospitals overseas such as Ronald Reagan UCLA Medical Centre, Cleveland Clinics.

## **Designing for the future**

### **Simulating the future Accident & Emergency Department**

Key portions of the hospital have been designed using LEAN principles. For example, the A&E has been designed to maximise resources and efficiency in workflow and layout. The A&E layout is planned to allow for the area that requires the most manpower and resources to be concentrated in the centre; which allows manpower to be easily re-deployed to surrounding areas when the need arises.

The A&E department employed the use of advanced simulation modeling programme to test the feasibility of the proposed layout, as well as plan for future expansion. With the programme, the A&E team was able to stress-test the planned layout and workflow based on current patient load and projected patient loads in 2015 and 2020. Armed with the simulation results and statistics, the team is able to forecast how its infrastructure can support an increasing patient load, and allows hospital planners to design a scalable A&E to meet changing and future demands.

### **Maximum flexibility and ease of conversion**

The Specialist Outpatient clinics Modular Design provides for maximum flexibility and conversion in future. In the NTFGH (SOC), each clinic module consists of four consultation rooms, and corresponding support rooms which include a teaching hub. The wards are also modular and repeated throughout the ward tower to allow flexibility for conversion between different classes of wards in the future.

### **Pandemic-preparedness**

The hospital is designed to enable swift lock-down during pandemic, minimizing disruptions to normal visitor, patient and staff workflows. Provisions will be made to separate the ventilation of 'clean' air from 'dirty' air; and isolation beds on every floor will minimise cross infection during transfers. Selected A class wards will also be specially equipped so that they may be quickly converted to negative pressure isolation rooms quickly. In addition, the space between the A&E & JCH will enable the A&E to screen and triage patients during a pandemic. The space will also be equipped with decontamination equipment so that the hospital will be ready for hazmat incidents.

## **A Window for Every Patient**

The revolutionary fan shape ward, designed with a window for every patient, will significantly improve ventilation, privacy and comfort for patients. In addition to subsidised and private wards, this concept will also be extended to ICU and HD beds to promote healing for critically ill patients. The attributes of the fan-shaped ward includes:

**Enhance patient comfort and recovery:**

Patients will be able to enjoy greater privacy as they can choose to face their own window instead of the next patient when they rest. They can also draw the curtains and yet maintain good ventilation as well as enjoy the soothing view of sky gardens located on every floor to bring the feeling of the exterior into this urban hospital as well as to create a conducive and healing environment for both patients and visitors. Even during wet weather conditions, patients will enjoy the well-ventilated environment with effective use of storm louvres to keep out wind-driven rain.

**Enhanced ventilation and optimising natural light**

For subsidised patients, the East-West orientation of ward towers takes advantage of prevailing wind conditions to promote ventilation. The massing concept also enhances wind movement due to the aerodynamic forms of the building. Patients in private wards will have air-conditioned room with individual thermal control or a naturally ventilated environment.

**Enhanced Working Environment and Infection Control for Staff**

Without the traditional low headwall shared between two back-to-back beds, the fan-shape ward layout also optimises infection control. Improved and enlarged space around the beds also translates to a better, ventilated working environment for staff - with more maneuvering space for nurses to conduct procedures and bedside care.

## **Annex C: Visuals of NTFGH and JCH**

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Ng Teng Fong General Hospital and Jurong Community Hospital – Integrated healthcare hub for the West:



The innovative fan-shaped ward which provides a window for every patient:



Life-sized mock-ups of eight key patient areas: