International Forum on Quality & Safety in Healthcare (Asia) Pre-conference Programme

26 September 2016
<table>
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<tr>
<th>Time</th>
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| 9.15 am  | Registration  
Venue: Ng Teng Fong General Hospital Tower A, Level 1, Training Centre  
(Excellence & Mutual Respect Rooms) |
| 9.30 am  | Opening Address by A/Prof Cheah Wei Keat, Chairman, Medical Board, JurongHealth                   |
| 9.40 am  | Building Ng Teng Fong General Hospital and Jurong Community Hospital:  
The JurongHealth Experience         |
| 10.50 am | Q&A                                                                                               |
| 11.10 am | Break                                                                                             |
| 11.20 am | Key Features & thinking behind the Mount Elizabeth Novena Hospital Project                        |
| 11.50 pm | Q&A                                                                                               |
| 12.00 pm | Group Photo                                                                                       |
| 12.15 pm | Lunch                                                                                             |
| 1.00 – 2.45 pm | Tour around JurongHealth facilities                                                                 |
| 2.45 pm  | Coach to Mount Elizabeth Novena Hospital                                                            |
| 3.30 – 5.00 pm | Tour around Mount Elizabeth Novena Hospital                                                       |
| 5.00 pm  | End of programme                                                                                  |
Building Ng Teng Fong General Hospital and Jurong Community Hospital: The JurongHealth Experience

Overview

1. Building an Integrated Healthcare Hub
2. Beginning with the end in mind: Incorporating The Patient Experience into Design and Workflow
3. Commissioning and safe opening of NTFGH and JCH
4. Building One JurongHealth Family
Building an Integrated Healthcare Hub

Tan Tai Soon
Director (Hospital Planning)
Content

1. Site Overview – Integration with Jurong Lake District

2. Connectivity between NTFGH/ JCH and Neighbouring Buildings

3. Key Guidelines for a Patient Centric Design

4. Design Concepts
Challenging Urban Site – part of Jurong Lake District

a) Long & narrow site: 600m x 100m
b) Site Area : 53,983 m²
c) Equivalent to 7.5 football fields
Connection To Neighbouring Buildings and MRT With Pedestrian Network At Level 2

Source: HDB
These key design goals, with **focus on Patients as our focus**, were established to guide the development of the **Ng Teng Fong General Hospital** and **Jurong Community Hospital**.

**Key Guidelines for a Patient-Centric Design**

- **THE PATIENT AS OUR FOCUS** (HIGH TOUCH)
- **INTEGRATION OF CARE ACROSS THE CONTINUUM**
- **SMART AND GREEN TECHNOLOGY** (HIGH TECH)
- **EMERGENCY PREPAREDNESS & OUTBREAK MANAGEMENT**
- **SPACE FOR RESEARCH AND EDUCATION**
- **TIGHT AND SEAMLESS INTEGRATION OF NTFGH & JCH**
- **HASSLE-FREE HEALTHCARE SYSTEM FOR THE POPULATION IN THE WEST**
Master Planning at the Beginning to Achieve Seamless Integration between NTFGH & JCH

PROS
- Proximity of CH & RH
- SOC proximity to MRT
- A&E proximity to CH (direct admission)
- Separation of high volume traffic to SOC & RH
- Expansion for SOC
- Green spaces available at both ends (Rehab on green deck)

CONS
- CH relatively further from MRT
Jurong Community Hospital
Total of 12 levels
400 beds (11% Private, 89% Subsidised)

• Level 1
  Admission & JCH Specialist Outpatient Clinics

• Mezzanine Level
  Clinical & Administration Space

• Level 2 & 3
  Private & Subsidised Wards

• Level 4 to 12
  Subsidised Wards

NTFGH Ward Tower
Total of 16 levels
700 beds (25% Private, 75% Subsidised)
28 Intensive Care Unit Beds
42 High Dependency beds
15-bed Isolation Ward next to Emergency Dept
18 Operating Theatres

• Level 1 to 4
  Diagnostics & Treatment

• Level 5 to 10
  Private & Subsidised Wards

• Level 5 to 16
  Subsidised Wards

NTFGH Clinic Tower
Total of 8 levels
Auditorium & Learning Centre Diagnostic Services Satellite Pharmacies

• Level 1
  Training Facilities (including an Auditorium) and Outpatient Radiology Services

• Level 2
  Pre-admission testing, Medical Social Services, Retail

• Level 3 to 7
  Specialist Outpatient Clinics

• Level 8
  Administration

TIGHT AND SEAMLESS INTEGRATION OF NTFGH & JCH
Jurong Community Hospital: Adjacent post-acute 400-bed facility, fully integrated with NTFGH

a) Siting JCH adjacent to NTFGH allows for convenient and safe transfer of patients from acute-care to post-acute and continuing care facilities.

b) Co-location of both hospitals allow for better coordinated and integrated care.

c) Design of the wards mirrors the fan-shaped design of those in NTFGH, providing a window for every patient.

LIFE Hub, unique three-room HDB mock-up flat for patients to gain confidence and rehabilitate back into their home environment under guidance of therapists.
Pedestrian & Vehicular Traffic Flow

Segregation of high vehicular traffic of the inpatient blocks from the outpatient block

Separation of pedestrian traffic (L2) from vehicular traffic (L1 & basement)

Connected basement parking with 3 entrances and exit points

Integrated car parks (2 basement levels)
Clinic Tower: Synergy of different specialties were studied for better adjacencies.

Closer to lifts for Geriatric patients.
Ward Tower: Horizontal & Vertical Adjacencies

L1  DI --- ED --- ISO WARD
Close proximity for better adjacent support and lower exposure to contamination

L3  MOT ---- DSOT
Better resource planning and flexibility

L4  ICU ---- HDU
Better deployment of staff and resources; co-management of intensive care patients

L5-16  WARDS
Vertical proximity to Clinical Locations
Inpatient Wards:  
A Window for Every Patient

a) Natural light to aid in patients’ physical recovery and improved mental state. Promotes awareness of time of day and reinforce the natural circadian rhythms.

b) Optimise infection control and enhance care by staff.
Enhanced ventilation with orientation & slender floor plate

a) Ventilation is further enhanced by the north-south orientation (also better sun shielding) and the curvilinear, aerodynamic form of the subsidised ward, which takes advantage of the prevailing wind conditions to enhance airflow.

b) The corridors are also single loaded to maximise airflow throughout the entire structure.
Emergency Preparedness: Ready to meet the Emergency Needs of the West

a) **Dedicated Trauma Lifts** for critical cases to be transferred directly to the Operating Theatres and Intensive Care Unit for swift and immediate medical care.

b) **Modular Trauma-ready Rooms** where each room combines two typical resuscitation units to provide space for life-saving care.

c) **Mass-casualty and decontamination-ready** for industrial accidents due to proximity to industrial areas (i.e. Jurong Island).
Emergency Preparedness: Mass Casualty/Decontamination Setup

- P3 ward area will be shutdown in case of Decon.
- A&E will setup an alternative P3 Clinic located within Level 1 of the Community Hospital.
- Normal SCDF cases are not affected by the Decon Setup.

Normal SCDF Cases are not affected by the Decon Setup.
Emergency Preparedness: Pandemic Outbreak

a) Hospital is designed to enable **swift lock-down** during pandemic, without disrupting normal visitor, patient and staff workflows.

b) Controlled public entry into the hospital at strategic points, while maintaining public path at Levels 1 and 2.

c) Segregated air-con systems between public and hospital zones at strategic points.
Emergency Preparedness: “Isolation” Zone of the Hospital
Centrally activated via the Building Management System (BMS) at the One Response Centre (ORC)

Filtered Air delivered to each patient bed via air duct system

Active carbon filter to remove unpleasant odour
Centralised Critical Care: One Location, One Team, One Standard of Care at the Intensive Care and High Dependency Unit (ICU / HD)

a) First Intensive Care Medicine Department in Singapore.

b) The only combined critical care facility merging conventional ICUs (Surgical, Medical, Cardiac) and HD for better utilisation of staff and resources.

c) Patient-centered structure to facilitate seamless workflow. Convertible flexibility between HD and ICU to reduce the need for patient transfers.
Designed to be Environmentally Sustainable and Green

a) Designed to be as carbon-neutral as possible in the infrastructure, water and energy systems, and landscape features through holistic Total Building Performance approach.

b) Green Mark Platinum Award by the Building Construction Authority of Singapore in 2013.
Designed to be Environmentally Sustainable and Green

- JurongHealth Mobility Park
- Sunrise Garden
- Healing Garden
- Ward Tower Planters
- Clinic Roof Garden
- Roof Garden
- Community Garden

Landscaping moulds absorb and deflect ground level noise
Energy Efficiency

Energy Savings

- Solar thermal system for hot water supply
- Photocell sensor lightings activated when an area is not bright enough
- Lifts are installed with regenerative technology to produce energy
- Occupancy sensor lightings activated by movement and body heat
- Selective deployment for LED lightings
- PUB WELS certified water-efficient fittings to reduce wastage of water
- Rainwater harvesting for watering of plants
- Utilising NEWater in the cooling towers for the air-conditioning system

Water savings

550 solar panels provide heat for the hospital's hot water supply

Energy savings per year: 20,829,902 kWh (equivalent to powering 3703 5-room/executive flats for a year)

Water savings per year: 68,350m³ (equivalent to 27 Olympic sized swimming pools)
Beginning with the end in mind: Incorporating The Patient Experience into Design and Workflow

Kuttiammal Sundarasan
Group Chief Nurse
Content

1. Key Considerations
2. Hospital Preparation Process (H2P)
3. Designing the Hospitals – Key Clinical Areas and Pandemic Readiness
4. Use of EMR, Equipment and IT Systems to Integrate Care, Improve Efficiency and Safety
5. Nursing Projects and Our Innovation
6. ONE Patient Experience across the Continuum
   • Specialist Outpatient Clinic
   • Acute Hospital
   • Community Hospital
7. Life Hub and Mobility Park – Simulated environment to help patients ease back into the community after discharge
Key Considerations

1. Patient at the center of all that we do:
   a) Seamless and hassle free experience throughout both the hospitals (3 Towers).
   b) Patient safety (infrastructure and work processes flow).
   c) Conducive environment for resting and for healing to take place.
   d) Facilitate implementation of infection control measures.

2. Staff at the center of all that we do:
   a) Hassle free care delivery with the use of technology.
   b) Cutting down time spent by Nurses to organise care delivery.
   c) Conducive environment for staff
Hospital Preparation Process (H2P)

a) Based on the Toyota Production System, originally known as Production Preparation Process, the H2P is a methodology that incorporates Lean principles to initiate healthcare design change, service change, or new service launches.

**Phase 1**
Identify base design and areas for improvement.

**Phase 2**
Construct spaghetti diagrams to visualise how users will use the space based on their workflow, to identify bottle-necks and minimise waste.

Creating Lean layout designs to try-storm and simulate workflows
Thoughtful co-location of clinical services on the same floor to optimise patient experience.
Tower B
Designing the Emergency Department Using the Spaghetti Diagram of Patient Flow

EDTU: 12 Beds
P2 Non-Fever: 26 Beds
Wait Area
X-Ray: 2 Rms
CT Rm
Trauma Lifts
Lift to Inpatient Wards
Ambulance
Walk-in
Discharge

In ED
Within ED
Out of ED
Designing the Emergency Department

Two rooms in Isolation Ward are ICU-ready!
The Racetrack design is an open design model with a centralized work station for staff. Ideally all patients can be seen from the central station and high acuity patients can be segregated from low acuity patients.
Designing the Intensive Care & High Dependency Unit (ICU/HD)

- Flexibility between ICU and HD allows for effective manpower and resource allocation
- Continuity of care, lesser handoffs to avoid errors
Pandemic Readiness in ICU/HD

- Normal
  - Isolation beds to be increased in stages

- Pandemic
  - Visitors
  - Isolation patients
  - Normal patients
  - Food & clean supplies

Pandemic Containment Shutters

- No Visitors
- Roller shutter will separate isolation patient lift from other lifts
- AGV lobby to be also separated by roller shutter
Designing the Peri-Operative Areas

- Endoscopy
- Endoscopy Recovery Bay
- Ambulatory Unit
- OR PACU 1
- OR PACU 2
- OR Reception
- Patient Lifts
- Trauma Lifts
- EOT 1 & 2
Clean Core Concept

One-way flow of soiled supplies out of the operating room and sterile supplies into the operating room on a separate, dedicated route through the designated elevators.
Designing the Ward

Legend:
- Dirty Utility
- Equipment Room
- Treatment Room
- Medication Room
- Nurses Station
- Clean Utility (CU)/ Sub-CU
- Parking Alcove
- Patient’s Toilet

Easily accessible hand washing basins, hand rub and PPE.
Pandemic Readiness in the General Ward

- No Visitors
- Roller shutter will separate Isolation Patient Lift from other lifts
- AGV lobby to be also separated by roller shutter
- No AGV to isolation ward – push trolley via service lift

Door separating subsidised and non-subsidised wards

Containment Shutter at bed lift lobby
Use of EMR, Equipment and Other IT Systems to Integrate Care, Improve Efficiency and Safety

More than an EMR - Includes ED, ICU, Radiology, Pharmacy, Laboratory/Pathology, OR/Anesthesia, Ambulatory, Physician Order Entry, Clinical Documentation, Appointment, Patient Portal, Clinician Portal and Bed Management System and many more..

Benefits

a) Seamless flow of Patient Information.
b) Reduce data entry as data entered is available to different clinical teams.
c) Reduce interfaces between systems and therefore interfacing errors and lag time for data to flow from one system to another.
d) Better use of data for preventive care when all clinical data is in a single system.

Nursing Projects
1. Patient Information Board (PIB)
2. Closed Loop Medication Management (CLMM)
3. Code Blue Activation
4. 4-button Housekeeping Activation
5. Nurse Managers Dashboard
1. Bedside Patient Information Board (PIB) provides real-time patient information and reduces time spent on manual paperwork

PIB replaces paper placed at patient’s bed panel and integrates with patient registration (SAP PM) and EMR (Epic)

✓ Eliminates manual updating of patient’s information and special care instructions at every admission → nurses can spend time delivering better patient care.

✓ Enhanced patient safety – patient care information is captured accurately in a standardised format and will not be lost during nurses’ shift handover.
2. Closed Loop Medication Management (CLMM) – Nursing Workflow

- **Patient Admission**

- **Prescription on Epic**

- **Medication Order Check**

- **Medcart only unlock specific drawer upon selection of the right patient**

- **NURSING**
  - Nurse pushes Medcart to Patient’s bedside for dispensing
  - E-Med Cart

- **INPATIENT PHARMACY**
  - Package & barcode tablets / capsules
  - Unit dose Barcoded Medication*
  - Top up to wards
  - Secured medication storage at ward (90%) 24hr supply

- **5 Rights of Medication Administration:** Right Patient, Right Drug, Right Time, Right Route and Right Dose
3. Our Innovation

a) Handset – Subsidised Wards

b) Emergency & Code Blue Activation System

c) Nurse Managers Dashboard @ Main Nurse Station

d) 4-button Housekeeping Activation System
**ONE Patient Experience across the Continuum - Specialist Outpatient Clinic**

**One Queue, One Bill:** Patients are provided with visit itinerary and consolidated bill at the end of visit. Enables staff to focus on financial counselling and other value added services while managing a monthly load of 12,000 outpatients.
ONE Patient Experience across the Continuum - Inpatient

- Emergency Department
- Operating Theatre (OT) / Cardio Vascular Lab
- Intensive Care Unit (ICU)
- JurongHealth Mobility Park
- Life Hub
- JCH Ward
- Home/Step-down Care
- NTFGH Ward

Direct Admission

Admission via ED
Life Hub – Rehabilitating in a Home-Like Environment

Key Design Concept: “Aging in place” – helping seniors remain at home, healthy and independent.

LIFE Hub features a unique three-room HDB mock-up flat for patients to gain confidence and rehabilitate back into their home environment under guidance of therapists.
JurongHealth Mobility Park – First of its kind in Singapore to feature a life-like simulated environment for patients

**Bus**

Bus shelter integrated with bus and train carriage mock-ups to simulate actual environments for patient training.

**Train Carriage**

Endurance training loop pathway.

**Steps & Ramps**

Different surface textures – Cobblestone, Sand, Turf, Raised wooden strips are simulated to help patients and caregiver to manoeuvre around, aided or unaided.

**Terrain Walkways**

Traffic lights are equipped to allow elderly and persons-with-disabilities up to 13s more time to cross the road.

**Traffic Lights**

A decommissioned taxi allows for vehicle access training. The boot is used to teach proper way of stowing the wheelchair neatly and safely.
Commissioning and Safe Opening of NTFGH & JCH

Ng Kian Swan
Chief Operating Officer
Contents

Transition Strategy

Migration Activities

Commissioning Activities
ONE Patient Experience
A Transition Strategy

All key activities and milestones that transition entail are identified and weighted especially against:

a) Starting with the vision
b) Patient & staff safety
c) Tight integration of care and services between NTFGH and JCH
d) Continuity of Care: Sequencing - no service is interrupted or, where unavoidable, the interruption is kept to the minimum
e) Collaborative, coordinated approach with diverse partnerships
f) Clear communications, roles, responsibilities
g) Detailed work plans, action lists, progress measurement
h) Include patients, families, staff and partners
i) Adequate and dedicated resources (time, people, tools)
Transition Planning – 3 major areas of focus
Migration, Commissioning & Handover of Alexandra Hospital (AH)

Transition Planning Steering Committee (TPSC)
Chaired by CEO, TPSC provides oversight and leadership to ensure on time opening of NTFGH / JCH and handover to MOH/H and Sengkang team; Coordinate & Collaborate with MOH, MOHH & other members of the healthcare family on transition planning. Drive community engagement and external communications.

Transition Planning Workgroup (TPW)
Lead by ACOO, TPW monitor, coordinate and track progress of all key activities and milestones that transition entails.

Migration
a) Scenario planning – patient volumes & clinical services
b) Patient Management
c) Human Resources
d) Staff Orientation and Training
e) Coordination with other healthcare institutions & SCDF
f) Move Planning & Drills
g) Preparation for the Move
h) Community engagement
i) Media management

Commissioning
a) Taking over of facilities
b) Facilities Readiness
c) Technology Readiness
d) Staff Readiness
e) Full Dress Rehearsals
f) Patients move (from AH to NTFGH)
g) Preparing the facilities for MOH
h) Licensing and audit
i) Risk Management

Handover to MOH/H & Sengkang Hospital
a) Handover schedules
b) Patient management plans
c) Equipment
d) Service Contracts
e) Medical records management
f) Others ……….
Migration
Migration preparations started since October 2012

Key Migration Activities

a) Designing operational and care processes at NTFGH & JCH
b) Developing new policies and work instructions
c) Manpower readiness – recruitment, development and training
d) Equipment planning, procurement, training, commissioning and testing
e) IT planning, testing and implementation
f) Staff training – processes, IT systems
All departments were involved in the validating and refining of workflows around the hospital design.

NTFGH & JCH aim to serve patients better through tight integration between its services. We will provide the entire continuum of care, to meet the patients’ acute needs at NTFGH, after which, step down, sub-acute or chronic care can be delivered at the JCH. From the patient care perspective, this will be smoother and more hassle-free for patients transferred from one facility to the other, thus enabling our patients to receive care which is efficient, seamless, comfortable and accessible.
Medical, Non-Medical Equipment and Instruments, Supplies and Consumables procurement and delivery based on site readiness

Medical Equipment
15,000 pieces
- TOTAL: 106
- RFP Awarded: 106
- RFP Called: 0
- Not started: 0
100%

Non-Medical Equipment
30,000 pieces
- TOTAL: 22
- RFP Awarded: 17
- RFP Called: 5
- Not started: 0
100%

Outsourced Services
- TOTAL: 30
- RFP Awarded: 8
- RFP Called: 2
- Not Started: 7
- Contract Extensions: 13
76.7%

Key IT projects
110 Applications
- TOTAL: 15
- RFP Awarded: 15
- RFP Called: 0
- Not started: 0
100%

Other IT Projects
- TOTAL: 35
- RFP Awarded: 32
- RFP Called: 1
- Not started: 0
- RFPs that would not be called in 2014: 2
100%

Medical Instrument
10,000 pieces
- TOTAL: 2
- RFP Awarded: 1
- RFP Called: 1
- Not started: 0
100%

New Hospitals Procurement

Medical Consumables, Supplies & Implants
- TOTAL: 10,000 pieces
- RFP Awarded: 1
- RFP Called: 1
- Not started: 0

Done

Common and critical medical consumables & supplies (stock items) to be stored in Logistic Hub through collaboration with SingHealth Services (SHS) GPO.
Furong Health
Serving the Community in the West

Commissioning

- November 2014: Achieved Top for NTFGH Basements 1 & 2
- February 2015: Achieved Top for NTFGH Clinic Tower
- March 2015: Achieved Top for NTFGH Ward Tower
- June 2015: Achieved Top for JCH & 2 Link Bridges to Westgate & Big Box
- October 2015: Achieved Top for JCH Basement
Commissioning involves efficient and seamless taking over of NTFGH & JCH from the contractor and getting it operationally ready.

**Key Commissioning Activities**

1. Facility Readiness (Hardware)
2. Equipment and Operational Readiness
3. Technology Readiness (Software)
4. Staff Readiness (Heartware)
5. Way Finding
6. Full Dress Rehearsals
7. Licensing and Audit
8. Patient Move from AH to NTFGH
9. Opening of NTFGH & JCH
Pest Control is critical
Defects Identification and Rectification. Need to rank and prioritise defects rectification based on severity index. Major defects such as water leakages may be as a show stopper.

**Category A Defects**
- Water Leakage
- Wrong siting of sink
- Safety Issue

**Category B Defects**
- Wrongly fitted pipe
- Cracked wall
- Fan blade defect

**Category C Defects**
- Rough wall surface
- Misaligned Flooring
- Wall paper peeling off

**Attention to details - 5S**

Don’t turn our beautiful hospital into a “new, old building” – scotch tape ruins!
Facility Readiness – Delivery and Commissioning of the MRT Carriage, Bus and Taxi for Mobility Park for Outdoor Rehabilitation Treatment for Patients
Facility Readiness – The “Royal Flush“ for more than 500 toilets concurrently to ensure that pipes are tightly sealed and clear of waste
The Integrated Building System ensures all systems in NTFGH and JCH worked effectively and efficiently. Integration of lighting, HVAC, fire/life safety, and all other engineered systems had resulted in greater functionality and facilitates optimum building operations.

**Building Integrated Systems**

a) Pneumatic Tube System – for transporting drugs and blood specimens  
b) Automated Guided Vehicles (AGV) – for transporting of meals, linen, drugs, waste and medical supplies  
c) Fire Protection System  
d) Mechanical Ventilation  
e) Lifts and Escalators  
f) Emergency Voice Communication  
g) Security System  
h) Auto-doors  
i) Fire Roller Shutters  
j) Power Disruption Testing at Clinic Tower  
k) Testing of UPS and Emergency Power
Equipment Readiness – Tedious Process of Equipment Checks at ICU, CSSD, OT

ICU room fitted out with bed and equipment

Nurses checking equipment at CSSD

Vendors doing final checks on ESWL machine

Checking for Radiation Dose Accuracy, Electrical and Equipment Safety Features, OT Lights and pendants
Kitchen: Town gas turn-on on 30 January 2015 and staff familiarizing themselves with the cooking equipment. Hospital staff got the opportunity to sample the food before the hospital opens on 30 June 2015.
Technology Readiness

Technical Walkthrough of the Hospital Workflows to ascertain test and ascertain our IT systems’ readiness
Technology Readiness –
Technical Walkthrough for 1 Queue 1 Bill

Patient waiting area with Queue display panel

Patient Self-Registration Kiosk

Registration counter. PSA collect referral letter, print Q-Chit

Scanning referral letter via DDS

PSA transfers Patient to Treatment room for ECG and Specimen collection

Patient sees doctor at Consultation room:
1) Read scanned referral letter
2) Enter vital signs, progress notes
3) Place ECG and 2 Lab Order
4) Collect lab specimen
5) Print specimen label from mobile label printer

Patient Q-Chit, Queue number displays at patient waiting area and consult room
Technology Readiness – Technical Walk Through at Ward on 30 Jan 15

Patient undergoes Financial Counselling (SAP eFC) @ SOC and bed is booked (Epic-Cadence)

On day of admission, Admissions Office admit patient and tags patient using RTLS tag

Patient is received by Ward staff

Ward Nurse conducts ward orientation and nursing assessment with patient

Nursing Dashboard, patient information, orders are extracted from Epic

Doctor puts in orders

Doctor performs medical assessment

Vital signs of patient are taken during Physiologic monitor which flows into Epic
The IT Business Continuity Plan (BCP) contingency exercise was held on 7th and 8th May 2015 and attended by over 100 staff including clinicians, nurses and staff from allied health, services operations and support services. The participants revised existing downtime procedures for main system such as SAP and developed new ones for the main critical IT systems, namely EPIC System.
Staff Readiness – Practice make perfect – Learning new skills to optimize patient care.

Point of Care Testing (POCT) – HBA1C Training in SOC conducted by Lab staff

Physiologic monitor training at Emergency Dept

Point of Care Testing (POCT) – Arterial Blood Gas Machine Training with Emergency & ICU staff
CODE BLUE: 50 colleagues from Emergency Dept, Security and Transport conducted a Code Blue Full Dress Rehearsal. This FDR helps to ensure that we are ready to respond to any medical emergency that occurs in NTFGH.

Fire Drills evaluate our staff response to a simulated emergency. They are also a test of NTFGH’s fire safety/evacuation plans and staff training needs. In addition, we used the drills to test the communication between staff, Security, and the Command Post.
23 – 27 March 2015
Departmental Full Dress Rehearsals (D.FDR) provided us with the opportunity to test scenarios with mock patients and evaluate new workflows, operational plans, system integration, staff training effectiveness and equipment functionality.
5 – 6 May 2015
Hospital Full Dress Rehearsals (H.FDR) were conducted as a final assessment to ensure tight integration of care and services at all touch points across NTFGH and JCH. Patient, Information, Equipment, Way Finding and Downtime Workflows were tested.
Way Finding

Jungle of Signs...
Volunteers participated in a Way Finding exercise to ensure ease of navigation around our hospitals

NTFGH & JCH is a large hospital campus and can be challenging to navigate, especially for visitors and patients. Hence, we needed to ensure that the signage in our hospitals are adequate.
Licensing and Audit (L&A) - Early and Ongoing Engagement with MOH L&A Team to ensure Hospitals meet Licensing Requirements

Meeting to discuss licensing plans:
- Sep 2013
- Oct 2014
- Dec 2014
- May 2015

Aug 2012
1st Sharing session on licensing requirements

Dec 2013 – Jan 2014
Soft audits on Mock-Up Units at NTFGH Site Office

Mar 2014
2nd Sharing session on licensing requirements

Aug 2014
EMR demonstration to MOH inspectors

Nov 2014, Mar 2015
Preview visits of NTFGH facilities

Preview visit of JCH facility on 22 May 2015

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Preview visits of NTFGH facilities

Preview visit of JCH facility on 22 May 2015
Mock audits were conducted from 15 April to 17 April 2015 as part of the preparations for the actual L&A scheduled from 20 May to 22 May 2015.

Besides MOH L&A, we also needed to obtain a full list of required Accreditations/Licenses/Permits/Certificates (eg: clinical Lab licensing, etc.)
29 June 2016
In preparation for the move of inpatients, a patient move Command Centre was set up to prepare, coordinate the entire move, track progress, identify issues and coordinate communication. Multiple rounds of table top exercises and rehearsals were conducted before the actual patient move. Our smooth and safe transit on brought smiles to our patients and their NOK
Ng Teng Fong hospital to open on June 30

Staggered opening will give it time to ‘build up competency’, says minister

By SALMA KHALIK
SENIOR HEALTH CORRESPONDENT

THE new Ng Teng Fong General Hospital (NTFGH) in Jurong will open its doors to patients on June 30 - more than six months behind its original schedule, owing to construction delays.

Initially, it will operate 30% of its 700 beds and 80% of its 120 outpatient clinic consultation rooms. Its emergency department will only treat those critically ill. Less serious cases will be transferred to other public hospitals until early next year, when the hospital will accept all ambulence patients.

Health Minister Gan Kim Yong toured the facilities yesterday and revealed details of the staggered opening, which will give the new hospital time to “build up competency and familiarity”.

He said medical services director Ben Ong has been coordinating care across the country by managing the capacity of public hospitals.

Also, on June 30, Alexandra Hospital, which the NTFGH staff are now staffing, will close for renovations. When it re-opens, it will be run by a new team that will then go on to staff the general hospital in Sengkang, which is slated to open in 2018.

Patients warded at Alexandra will be given the option to be transferred to the new NTFGH on June 29, or to another public hospital before that date.

Mr Foo Hee Jug, chief executive of Jurong Health, which will run NTFGH, said he expects about 50 patients will need to be moved by ambulance to the new hospital. Traffic Police will help ease the route between the two hospitals, so patients do not have to endure a “start-stop journey”.

The hospital will have a 3,000-strong staff and is expected to have 550 beds and 93 clinics in use by the end of its first year.

A quarter of its beds will be for private patients. But all patients, subsidised or private, will have a window because of its fan-shaped layout that is also designed to give maximum privacy.

In line with newer ward designs, even the cheapest C class wards have six beds in a section sharing a toilet and shower, which is better for infection control.

In older hospital wards, toilets and showers are centralised and often a distance away.

Mr Gan said having natural light, ventilation and a view to the outside world will help patients recover faster.

Because of the large industrial area nearby, the hospital expects to see more trauma cases than other public hospitals, and it will be able to provide decontamination if necessary. Its emergency department has six beds for critically ill patients who might need resuscitation, and 26 individual rooms for the severely ill. The latter can be quickly reconfigured in an emergency to cater to a much larger number of casualties.

Meanwhile, two of the hospital’s unused wards, with a total of 76 beds, will be turned into community hospital wards and be run by staff of Jurong Community Hospital, which will open next door later this year and will eventually have 400 beds of its own.

黄廷方综合医院6月30日投入运作

黎远漪 报道
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因建筑材料短缺和人手不足而延迟开业的黄廷方综合医院6月30日投入运作。这家医院是新加坡首座以市场为基础的医院，旨在为社区提供医疗服务。黄廷方综合医院的开放标志着新加坡医疗服务的现代化和多元化。

黄廷方综合医院共设有700张床位和120个门诊咨询室。其中30%的床位和80%的门诊咨询室将从6月30日开始运营。医院的急诊部门将只接收危重病人，其他轻症病人将被转至其他公共医院。

医院的紧急服务区域将为所有病人提供自然光、通风和室外视野，以促进病人康复。同时，医院的病房设计也将提供最佳的感染控制。

此外，医院的急诊部门将设有6张床，用于处理危重病人，以及26间单独的房间，用于处理病情严重者。这些房间可以在紧急情况下迅速重新配置，以适应大量病人的需要。

与此同时，医院的两个未使用的病房，共76张床位，将被改装为社区医院病房，并由黄廷方综合医院的工作人员管理。这标志着新加坡医疗服务的现代化和多元化。

前往医院急诊室的病人若确诊须住院，医院将安排他们转往中央医院或国大医院，以减少病人转介可能带来的不便。
Health Minister Gan Kim Yong paid tribute to our staff for the hard work, dedication and commitment in opening NTFGH safely and smoothly. It was a sweet wrap up for this part of the JurongHealth journey. Quoting Minister Gan, we have worked hard to arrive at the “starting point” of our role as a Regional Health System.
Building One JurongHealth
Family

Anna Fok
Group Chief Human Resource Officer
Build Culture
Attract
Develop
Engage & Retain
Transition
In 2009, we started to build our Vision, Mission and Values, focused on Residents, Patients and Caregivers.

Views from board members, staff and patients were obtained in the stakeholder engagement phase.

220 staff validated the values and mission statements.

**Vision**
Transforming Care. Bringing Health to Every Home.

**Mission**

**Core Values**
- **Integrity**
  We uphold trust through all we say and do.
- **Patient-Centredness**
  We design and deliver care around the needs of our patients and their caregivers.
- **Openness**
  We embrace open communication, change and champion innovation.
- **Excellence**
  We give our best every time.
- **Mutual Respect**
  We treat each and every individual with dignity.
In 2012, we further developed the behavioral statements for our core values:

**Integrity**
We uphold trust through all we say and do.
- Say what I mean, mean what I say, and do what I say
- Do the right thing and do things right, always
- Be honest and accountable for our actions, decisions and results
- What I expect of others, I first expect of myself

**Patient-Centredness**
We design and deliver care around the needs of our patients and their caregivers.
- Be professional in the way we care because we are all healthcare professionals regardless of our roles
- Care for our patients, their families and caregivers with respect, compassion and dignity
- Embrace the belief that keeping our patients and population healthy is possible, and is better healthcare
- Treat our patients as vital members of our teams – listen to what they tell us, communicate our plans to them, and keep them engaged and empowered

**Openness**
We embrace open communication, change and champion innovation.
- Start with a positive intent
- Foster a climate where people are able to express their views, provide constructive feedback, and be receptive to diverse ideas
- Be curious to learn from anyone and anywhere for improvement
- Encourage innovation. Be personally willing and have the courage to champion change

**Excellence**
We give our best every time.
- Provide the best, safest and most affordable care possible, centred on the needs of our patients, working together as a cohesive team
- Have a “can-do” attitude and drive to get the job done well
- Be credible. The goals we promise, we deliver always
- Be resilient. What I start, I have the discipline to finish

**Mutual Respect**
We treat each and every individual with dignity.
- Be kind and gracious to each other
- Coach in private and praise in public
- Appreciate and value each other, our diverse backgrounds and unique perspectives
- Personally commit to the success and well-being of every member of the JurongHealth family

Internalised and Inculcated through various initiatives:
- “IPOEM & Me” workshop
- Role Modelling by leaders
- Values Assessment in Performance Appraisal

400 staff were involved in scripting behavioral statements.
Inspiring commitment in our leaders
We grew our family to 4,000 in 6 years

Recruited about 1,000 staff each year (including turnover replacement)

Two-thirds of our staff are Doctors, Nurses and Allied Health Professionals

Workforce from 22 nationalities contributed in building our hospitals
We focused on recruiting the right number with the right skills and right values.

**Print Ads**

**Online Ads**

**Social Media**

**Career Fairs**
(local & overseas)

**Career Truck**

**MRT (subway) & Bus**

**Grassroots Outreach**

Partnering Grassroots leaders in 5 constituencies in the Western Region, to reach out to the residents and share job opportunities.
We embody the promise to advance our people development

Training Programme

Culture
a) JurongHealth On-boarding Programme
b) IPOEM & ME
c) Service Excellence
d) Safety and Quality (Patient Safety Foundation, Safety Talk, Mask Fitting, PPE & Hand Hygiene)

Everyone is a Leader
a) Performance appraisal training
b) Talent Management
c) Project Management
d) Supervisory Technique
e) Employment Act

Job-Based
a) Nursing Fundamentals
b) On-The Job Training
c) Training Attachment

System and IT Training
a) EMR training
b) Non-EMR training (Warehouse Management System, Meal Ordering System etc)
c) Microsoft Office

Sponsorship
a) Health Manpower Development Programme (HMDP)
b) Formal Qualification Sponsorship
c) Lifelong Learning Awards

Personal Effectiveness
a) Problem Solving
b) Communication
c) Knowing Your Strength
Preparing our leaders to lead transition

Leadership Development Programme

- Leader-Coaching
- 7 Habits of Highly Effective People
- Situational Leadership
- Corporate Storytelling
- 360° Feedback for Leader for Self Awareness and Development Needs
- Crucial Conversations

Leadership Talks

Distinguished Speakers

- Ken Blanchard, author and management expert
- Prof Tommy Koh, Former ambassador to the United Nations
- JY Pillay, Former chairman of Singapore Airlines
- Hsieh Tsun-Yan, Member of the Management Advisory Board at the National University in Singapore
- Rob Lilwall, Adventurer and author

Leadership Development Resources

- Online Resources
- Learning Organisation Email Blast
- Books
- e-Learning

Crucial Conversations
We retain staff by engaging their hearts

CEO’s message was inscribed on the wall of one of the office building

Building the JurongHealth Culture that is...
Patient-centred. Genuinely cares for every member of the JurongHealth Family, founded on living our values.
Integrity. Patient-centredness. Openness
We care about our staff’s well-being

a) Active Month  
b) Fun Friday at Five (F3)  
c) Fitness Classes - *Latinorobics, Pilates, New Age Taichi*  
d) Health Interest Groups  
e) Health Education Talks  
f) FISH! Programme  
g) Sports Try-Out  
h) Mindcare Programme  
i) Lunchtime Talks  
j) Bi-Monthly Fruits Distribution  
k) Bi-Weekly Fruits Bazaar
We connect and we listen

Forums
CEO-CMB Townhalls,
Managers Forum,
New Workplace
Engagement Forum,
CEO engagement with
staff etc.

Newsletters
Engage; Tune; In The
Loop; ONEHealth

Intranet

Social Media
Facebook, YouTube
Channel, LinkedIn

2-way communication

Staff Feedback Box

Employee Engagement Survey

Employee Engagement Survey
We celebrate and we embrace diversity

a) Dinner & Dance
b) Family Day
c) Nurses Day
d) Allied Health Day
e) Staff Recognition Dinner
f) National Day Celebrations
g) Festive Celebrations
Celebrating staff’s achievements

Innovative ways to celebrate staff’s career promotions

- Donuts
- Tiramisu cake
- Staff Promotion Celebration

- Power Bank
- Tribute Cards for promotees
- Coffee Mug
We appreciate and care for each member of the JurongHealth family

Staff Appreciation Month

Fish Notes & Fish Awards

Personalised Thank You Note
From CEO and CMB to staff who receive compliments from patients/public

The Key

Symbolises unlocking new horizons, and the key role that the staff have played in this journey.

4,000 Energizer Kits
Declining Turnover Trend

- FY2010
- FY2011
- FY2012
- FY2013
- FY2014
- FY2015
Preparing Staff for a Smooth and Safe Transition

Transition Training Plan for every staff

To prepare staff to be operational ready to work with new technology and new equipment

- Over 9,700 transition training places
- Involving 445 internal trainers
- 100% targeted staff completed EMR training
Providing transition updates anytime, anywhere

Mobile application to enable staff to retrieve latest information on transition.

Transiting from Alexandra Hospital to the new hospitals
Staff were involved in Transition Activities

Workplace Transition Coordinators

600 staff and supervisors helped to coordinate transition activities and keep other staff updated on the new hospitals’ progress and developments.
3-Hour NTFGH Re-boarding Tour

Customised site-tours to engage staff and get staff excited about working in the new hospitals

Tour includes visit to:
ICU
Wards
Admin areas
B2 areas
Auditorium
Learning Centre

110 staff volunteered as guides and concierges

2,700 staff joined the tour

Every department conducted their own tours to familiarise themselves with daily work pathways

Welcome Pack

Package includes:
Passport
Boarding Pass
Luggage tag
Tote bag
Picture frame
We opened NTFGH on 30 June 2015, 08.00 am
Senior management visited staff to thank them

Every staff was presented with
JurongHealth Pioneer Bear
Thank you
Q&A