Better People, Better Care
Transforming The Workforce, The Tan Tock Seng Hospital Way

Dr Eugene Fidelis Soh
Chief Executive Officer
Tan Tock Seng Hospital, Singapore

Value-driven Strategy
Better People
Better Care
Changing Context of Singapore Healthcare

Demand Side
Increased Ageing & Chronic Disease Burden

Supply Side
Growth in Bed Demand

System Sub-Optimisation
Fragmented Provider-Centric Care

Supply Side
Manpower as A Limiting Factor

Changing Disease Profile

Rapid Increase in Seniors
Number and proportion of elderly in the resident population

Source: MOH Healthcare Sectoral Manpower Mtg Feb 2015
**Workforce Challenges**

**Limited Supply**
In 2030, 1 in 13 will have to join Healthcare. Currently, 1 in 25 based on current model of care.

**Shrinking Labour Workforce & Tightening of Foreign Manpower**

**Multi-Generational Workforce**

**Manpower Challenges**

**Changing & Increasing Job Expectations**

**New Growth Areas & Skills Needed**

**Rising & New Demands**

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**Regional Health Systems:**
Ensuring Quality, Affordability & Accessibility

**Healthcare System:**
Tertiary: 80% Public; 20% Private
Primary: 20% Public; 80% Private

**Regional Health System (Central Singapore)**
1.4 Million Population (27% of 5.18M)
15% above 65y (10% Nationally)
52% of Inpatients above 65y (29% Nationally)

**TTSH (1.40M)**
Our Vision and Mission

Vision
Adding Years of Healthy Life

Mission
Building on our tradition,
Reaching out to the community,
Doing our best to serve, care and heal.
Together we aim for excellence in cost-effective healthcare, education and research.

TTSH At A Glance

Established since 1844
8,000 staff

One of the largest multi-disciplinary hospitals in Singapore
45 Clinical Disciplines and Allied Health Services

1,550 Operational Beds
3 Specialty Institutes
80 ICU & HD Beds
16 Specialist Centres
Multi-Generational Inter-Professional Workforce

Jul 2015

- Gen Y (1981 to <2000) 59%
- Gen X (1965 to 1980) 29%
- Baby Boomers (1946 to 1964) 12%
- Traditionalist (born before 1946) 0.3%

Multi Generational Workforce
Higher Proportion of Gen Y
Coming up… 5G Workforce!

TTSH in A Year… Acute Care

- 57,479 Inpatient Admissions +0.1% yoy
- 679,153 Outpatient Attendances +2.4% yoy
- 162,701 Emergency Attendances -0.8% yoy
- 86,519 Operations +7.8% yoy
- 462,141 Radiological Investigations +6.2% yoy
- 5,117,438 Lab Tests +4.6% yoy
- 39,089 Ambulance Cases +7.8% yoy

Based on Jan 2015 – Dec 2015
TTSH in A Year… Community-based Care

5,169 Home visits
1,021 ED visits avoided
564 Participants screened under CHEP
5,260 Home Therapy sessions

614 VH patients enrolled (Cumulative as at Dec 2015)
19.6% ED attendances avoided within 6 months of enrolment
46.3% admissions avoided within 6 months of enrolment
57,219 acute bed days saved through use of sub-acute beds
24,319 bed days saved through Buffer Step-down Unit

Based on Jan 2015 – Dec 2015

MOH-Healthcare 2020

Accessibility
We will always receive healthcare when we need it

Quality
The quality of our healthcare services will be good

Affordability
We will always be able to afford such services

OBJECTIVES:
Live Long, Live Well, with Peace of Mind
HEALTHCARE SYSTEM CLARITY

We will:
Set clear goals and directions, and work together to achieve them.

DIALOGUE

We will:
Dialogue with and give constructive feedback to one another and our supervisors in a safe and dignified environment.

RESPECT

We will:
Respect one another as professionals and value each other's contribution.

EQUITY

We will:
Have a fair, equitable and creative reward and recognition system that recognizes our varied talents.

OPPORTUNITIES

QUALITY OF LIFE

We will:
Build work-life quality and balance, in a safe work environment with adequate resources and even distribution of work.

BETTER CARE

Value = \( \frac{\text{Health Outcomes}}{\text{Costs of Delivering the Outcomes}} \)

TTSH Value-Driven Strategy

Transforming Care @ TTSH

Expanding the Value Box in Healthcare
TTSK: Our Efforts Have Helped us to Moderate Demand

Do Better thru’ Improvement

4.9% Average YoY Growth

Do Differently thru’ Transformation

3.9% Average YoY Growth (Moderated with current efforts)

We can try to reduce to 2.5% Projected Growth

Source: Acute, Rehabilitation @ AMK, Sub-acute and BSU source from QMIS.
Notes: Including BSU, EDTC, MAC* & Rehabilitation Wards @ AMK.
Excluding CDC Infectious Disease Wards and CDC1 Wards for Infectious Disease.

* Prelim figures of MAC patient days in Y2015.

BETTER PEOPLE

AON HEWITT BEST EMPLOYER

4-5% improvement in Employee Engagement and Satisfaction from 2013 to 2015

BETTER CARE

JCI ACCREDITATION

MOH PATIENT SATISFACTION

bottom 2 in 2010 to top 2 in 2014
Better People Better Care

How has Vision 2016 shaped your journey in TTSH?

Value-driven Strategy
Better People
Better Care
BETTER PEOPLE
Our Engagement Strategy in Response to People and System Challenges

David Dhevarajulu
Executive Director
Centre for Healthcare Innovation
Tan Tock Seng Hospital, Singapore

Flow of presentation

• A Vision for Engagement
• A Way of Thinking
• An Engagement Framework
• Journey and Milestones
• It’s Happening
• Moving on
Better People, Better Care

“A rational and emotional connection of the staff with TTSH, the team, the supervisor and his work, that is positive. Such engagement energises and motivates dialogue and action to bring the individual and organization to a position of Greatness.”

Source: TTSH Staff Values, Employee Climate Survey, Institute of Employment Studies, Towers Watson, Michigan RSB, NHS Model

A Way of Thinking

“Systems Thinking [is] a way of thinking about, and a language for describing and understanding, the forces and interrelationships that shape the behaviour of systems. This discipline helps us to see how to change systems more effectively, and to act more in tune with the natural processes of the natural and economic world.”

Peter Senge’s The Fifth Discipline Fieldbook
An Engagement Framework

14 Dimensions of Engagement

Organization
Direct Manager
Team
Work Itself

Discretionary Effort: Willingness to go "above and beyond" the call of duty
Desire to Stay
Performance
Retention
Vision 2016

Staff Values: Clarity, Respect, Equity, Dialogue, Opportunities & Quality of Life
Patient Values: Good outcomes, Safe care, Value for money, Co-ordinated care, Being Valued as an Individual

Adapted from: The University of Michigan, Ross School of Business

Group Activity

What is important and of value to your staff, for them to stay and strive in your organization?

- Spend 1 minutes reflecting on your own
- Spend 2 minutes sharing with the person on your right and left
AUGUST – OCTOBER 2011

Values – From the Staff’s POV

**Staff Values & Statements**

- **Aug’11:** Values Storming 22 statements
- **Oct’11:** Completed focus groups for 200 staff, led by senior leaders

**AUGMENTING STAFF ENGAGEMENT**

14 Dimensions of Engagement

- **Organization**
- **Direct Manager**
- **Team**
- **Work Itself**

**Discretionary Effort:** Willingness to go "above and beyond" the call of duty

**Desire to Stay:**

- Performance
- Vision 2016
- Staff Values: Clarity, Respect, Equity, Dialogue, Opportunities & Quality of Life
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Adapted from: The University of Michigan, Ross School of Business
Engagement at Leadership Level

14 Dimensions of Engagement

Engaging Skills Programme (ESP)
Engaging Leaders Programme (ELP)

Framework for Engaging Leadership (ELP) and Engaging Skills Programme (ESP)

Engaging Skills Programme (ESP)
Engaging Leaders Programme (ELP)

Measuring & Implementing Change

Use of Value Web Conversation & Engagement Tools

ELP: 149 participants (2012 – 2015)
ESP B: 395 participants (2013-2015)
Measuring & Implementing Change
Use of Value Web Conversation & Engagement Tools

An Engagement Framework

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- Retention

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Adapted from: The University of Michigan, Ross School of Business
Staff Engagement at Four Levels

**ORGANISATION**

- V16 MCM, Strategic Planning Retreats, Town Halls MCM Walkabouts – direction & dialogue to build Shared Vision

**DIRECT MANAGER**

- ELP, ESP, LEAP & LEAD Skilling & Support to build engaging leadership – to build “better people” driven by 4 Greats & 6 staff values

**TEAM**

- Projects, events, activities and communication initiated at family group, department & team levels – to create platforms to engage around 4 Greats & 6 staff values, to be “better people”

**WORK**

- ELP (May) - Talk show - Value add communication
- ESP Mod B (Apr onwards)
- Observation of Management Leadership (Jan 17 & above)
- 2° LEAP (May) - Dialogue with CEO
- 3° LEAP (May) - Dialogue with CEO

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**Journey and Milestones**

2011/2012

- Focus Groups with 200 staff representing different family groups to determine and define core Staff Values
- Focus Group with patients, management & staff to validate Patient Values

Engaging Leadership Program: ELP 2012
- Mod A (Aug 14 – 15)
- (Mar)

2013

- Engaging Leadership Program: ELP 2013
- Mod A (Aug 14 – 15)
- (Mar)

- ELP (May) - Dialogue with CEO

2014

- Observation of Management Leadership (Jan 17 & above)

2015

- 2° LEAP (May) - Dialogue with CEO
- ESP Mod B (Apr onwards)
- 3° LEAP (May) - Dialogue with CEO
- 4° LEAP (May) - Dialogue with CEO

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LEADERSHIP

- ELP (DG 17 & above) (May/Jul)

ORGANISATION

- Engaging for greatness
- Conversations on staff values and patient values across all departments
- Hosted/facilitated by MDs
- Presence of the C.Sofs

- Award: Health Best Employer Award Singapore 2013
- Value Festival (ID) - Talk - Gallery Walk - Workshop
- 170° Founder’s Day
- Launch of IC Fieldbook ‘Our Story, My Story’

- 8000 Voices
An Engagement Framework

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Vision 2016

Organization
Direct Manager
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Work Itself

Discretionary Effort: Willingness to go “above and beyond” the call of duty

Desire to Stay

Retention

It’s Happening

Retention Rate – All Staff

Sustained high retention of 90% & above, voluntary attrition 30% lower than MOM industry average

TTSH Climate Survey 2015
All scores improved over 2013

• Aon Hewitt Best Employer Award 2013 & 2015
• 1st and only healthcare organisation to be awarded, and also the only local company in 2015
It’s Happening
– Journey of Continuous Improvement

Quality Improvement Projects
(Cumulative Figures (CY2008 to present))

- Daily Improvement Projects (Implemented) – 3943
- MyCare Basic – 282
- MyCare Intermediate (Standard Work) – 426
- Value Stream Mappings - 65
- CPIP – 211

Quality Improvement Achievements and Awards
(2002 to present)

94

Patient Satisfaction Score 2014
• 78.9% in 2014
• Ranked 2nd out of the 6 public hospitals

Lessons & Insights

1. Start with a “Why” conversation
2. Engage / equip / empower middle managers
3. Tools / Frameworks build a common language
4. Leadership is a Relationship
Moving On –
Deepen Engagement

8000 Voices is the start of a sustained organisational effort to listen deeply to every staff, and practise appreciative inquiry.

Through 8000 Voices, it is hoped that larger plans for strategy and organisational development can be made in light of ground challenges and staff aspirations.

• >4,000 members and growing
• Platform for continuous conversations
• Energising postings by staff

1,500 staff have participated in 8000 Voices since Mar 2015

Towards Dreams and Aspirations
• “Together, we will build Relationships that are Trusted, Team-based, Sustainable, and Health-Focused. I am reminded that we are a pillar in the community we serve, and that these relationships are our foundation…to embrace a Collective Leadership for TTSH.”

– Dr. Eugene Fidelis Soh (CEO, TTSH), 14 Jan 2015

Tack!

TTSH Staff Engagement Workgroup
Value-driven Strategy
Better People
Better Care

BETTER CARE
Understanding & Delivering What Patients Value

A/Prof Wong Hon Tym
Clinical Director
Centre for Healthcare Innovation
Tan Tock Seng Hospital, Singapore
Defining Patient Value

Gathered the voices of our patients and healthcare colleagues

Don’t treat me as a dummy, listen to me.’

Involve me and my family in what’s happening. Don’t keep me in the dark or in suspense.’

I just need reassurance from the doctor that I will be fine. At the end of the day, we are looking to them for hope, assurance and to be treated with dignity.’

‘I think the doctor needs to be able to attend to my pain, tell me what’s wrong, explain and educate me on treatment plan and ideally make be better.’
What Our PATIENTS Value

WHAT PATIENTS VALUE

VALUE MEASUREMENT

VALUE CREATION

Goal:
To enhance patient experience and transform the way patient care is being delivered in Tan Tock Seng Hospital

The Conversation Continues  CareConnect
Singapore Patient Conference

A common platform for patients, family, caregivers, community and healthcare professionals to come together to share and to learn with each other; to develop new ideas on how we can co-create a better experience for patients in their journey of care.

DRIVING VALUE THROUGH IMPROVEMENT & INNOVATION
Case Studies
Driving Value Through Innovation

Innovation Cycle

1. Care & Process Redesign
   - Value
2. Automation, IT, Robotic Innovation
   - Waste
3. Job Redesign
   - Cost
   - Up-skilling
   - Substitution
   - Expansion

Our Phar-messy (previously)

Long queues, poor patient satisfaction

Many pharmacists stuck in the “backroom” sorting & packing drugs

Tedious medication reconciliation (re-work) was often needed for prescriptions from the wards & clinics

Too few “frontline” pharmacists to dispense, counsel and adjust prescriptions
1. Care/Process redesign
   • Re-engineering medication ordering process
   • E.g. Medication verification moved to clinics

2. Automation, IT, Robotics (OPAS)
   • Leveraging on technology such as Rowa and Parata
   • Reduce errors
   • Reduce needless waiting time

3. Job Redesign
   • From manual packing and verifications of medications to attending to patient in clinics for MSV (value adding)
   • Redeployment of manpower
   • Reduce workload

1. Improve patients’ satisfactions
2. Savings of 17 headcounts
3. Savings in $$

Outpatient Pharmacy Automation System (OPAS)

ROWA
• Box picking machine
• Blister packs are repackaged into dispensable pack sizes and loaded into automation via Prolog (automated restocking)
• ROWA fulfils orders by picking the repackaged boxes, sending them out via internal conveyor belt to assembly table
• Consistency in accuracy of picking - 99.96%
• Unique 2D barcode on repackaged boxes stores information such as drug name, strength, pack size.
Outpatient Pharmacy Automation System (OPAS)

PARATA
• Loose pill filling machine
• Very fast and highly accurate at 99.99%
• Automatic filling, capping and labeling
• Full locking cells, requires validation with barcode on stock bottle to unlock

16 pharmacists liberated!

Pharmacists were now engaged in more valuable work
“Upstream” medication supply verification → reduced re-work
More frontline counselling & dispensing
Reduced wait time
Improved Patient Satisfaction

Wards & Clinics
Cataract Surgery Today

- Most common surgical procedure
- Likely to rise, as population ages
- "Phacoemulsification & Lens Implantation"
  - 99% success rate
  - Very low complication rate
2009: Impetus for Change

• Cataract lists not maximally efficient
  – wide range of timings and practices
  – Waiting time sub-optimal
• Increased workload expected from an aging population
  – Productivity had to improve

Problems Variation in Technical Complexity

• This “mixed bag” (80% straightforward, 20% complex) is typical of a cataract operating list
But even straightforward cataracts didn’t have straightforward timings

- We had to improve.

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**Problems** Surgeon Variation
Problems **Unrestricted** Choice in Technique & Tools

- Myriad of options for all steps

Do the math...

\[ x \times x = \ldots \]
Impetus for Change

“Golden Dinosaurs” in Cataract Surgery

• The unquestioned autonomy of the surgeon
• The “standard way” of prepping, transferring and reviewing patients
• Who should do what

Re-Design Workshop

• 2009, over 5 full days
• Engaged a 20-person multi-disciplinary group for co-creation
  – surgeons, nurses, anesthetists, pharmacist, IT, Housekeeping, Operations, Billing & Finance, Patient Relations rep
• Streamlining of key steps: 45 → 27
  – Systems approach
  – Patient value-driven re-design
**Solutions Reducing Variation in Cases**

- Stringent case selection: Dr must indicate if the cataract is straightforward or complex

**Consultation**
- Technically straightforward
- Systemically Fit

30% supervised training lists
70% streamlined flow / “VAP”

**Surgery Pre-Assessment & Listing Team**
- Technically complex
- Systemically Unfit

Consultant lists
Advanced training list

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**Solutions Achieving Surgeon Consensus**
Solutions Achieving Surgeon Consensus

Consensus Practice for 9 eye surgeons

- (Grudging) commitment to try to operate in as much the same way as possible
- 19 changes (8 of which were "major") were volunteered
- Now: near 100% concordance in surgical style

Outcomes
Outcomes Surgical Success & Safety

- Continuous Audit
  - We kept our rates at 99%
  - Visual Outcome, Complication Rates unchanged from previous practice

Outcomes Much improved efficiency & consistency
Outcomes Patient Satisfaction

- 66% stated a better experience in this facility & flow compared to others
- 90% expressed willingness to return to the facility for subsequent surgery

Outcomes Staff Satisfaction
(Nurses, Anesthetists & Surgeons)

- Overall satisfaction

Doctors: 4.6
Nurses: 4.4
Environment: 4.4
Admission: 4.2
Discharge: 4.4
Overall: 4.4

TTSH
Health
Outcomes Standardization → Compaction of toolkit

Before = 27 instruments
After = 16 instruments

<table>
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<th></th>
<th>Current</th>
<th>VAP</th>
<th>Time Savings (mins)</th>
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<tr>
<td>No of instruments per set</td>
<td>27</td>
<td>16</td>
<td></td>
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<tr>
<td>Preparation Time per set (mins)</td>
<td>9</td>
<td>7</td>
<td>2</td>
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<td>Clearing Time per set (mins)</td>
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<td>Packing Time per set by CSSD/TSSU</td>
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<td>Cost per set ($)</td>
<td>$3,244</td>
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Outcomes Standardization → OT EMR Shortcuts

• Many fields could now be auto-defaulted
• Mouse-clicks & manual entries reduced
  – 39 (5 mins) → 15 (1 min)
  – Improved Turnaround time between patients
Outcomes “Golden Dinosaurs” toppled by standardisation & innovation

- CPIP: Elimination of 1st post-op day visit
  - Day After / 1 Week Later / 1 Month Later
  - → > 1000 clinic visits saved in 2013

Outcomes “Golden Dinosaurs” toppled by Job Redesign

- Strict standardisation & "protocolization" → clarity of tasks → delegation of traditional nursing duties to supervised healthcare attendants (eg: BP, pupil size assessment)
- Empowered healthcare attendants to initiate re-sequencing patients, if parameters were not optimal (no questions asked)
Outcomes Consistency Observe staff flow

Split-screen Video showing 2 consecutive cataract ops done in May 2011

1st Patient

15:42 Patient entry
15:48 7 min surgery
15:55 2 min undrape
15:57 Patient exit
TOTAL IN OUT TIME = 15 min

2nd Patient

15:58 Patient entry
6 min prep & time-out
16:04 30 min surgery
16:34 1 min undrape
16:35 Patient exit
TOTAL IN OUT TIME = 17 min

Video created by Tok Kian Yap & Wong HT

Challenges

• Placing the patient & process at the centre, not the surgeon
• Sacrificing personal habits & beliefs for consensus practice
  – Loss of surgeon autonomy and liberty
• Cynicism
  – “Cataract Factory” / “Cutting corners” / “Anti-innovation”
  – “What’s the rush?”
Where We (I) Could Have Done Better

- We didn’t involve any patients in the re-design (2008)
- Top-down, insensitive *declaration* of the need for change to my surgical team
  - These didn’t go down well:
    - “Burning platform” data
    - “This will bring down the cost of surgery”
    - “This is a project we have been tasked to do”
    - “We need to standardize our techniques”
    - Surgeons on immediate defensive; to this day, a couple still view the VAP with deep distrust
  - How I should have approached it
    - Strongly correlate the need for change to my team’s values & experiences
    - “Can we all work together to make our best operation an even better experience for our patients and ourselves?”
    - VAP process is now well-oiled, but we are battling high rental fees, volume fluctuations and manpower costs

Conclusion

- A transformed workflow has been created which is suitable for the majority of cataract patients
  - Centered on patient & staff values
  - Driven by the need for more productivity & less waste
  - Re-design facilitated by tried & tested pedagogy
    - Inter-disciplinary co-learning & co-design
    - Significantly streamlined as a result of consensus practice
    - Produces the same outcome as “standard practice”
  - Transformation of Care Model & Workforce
Inspiration

The Team

Leaders
- Wong HT, Lee SM, HanJK, Eileen Cha, Pearl
- Fern, Cindy, Arina

Facilitators & Advisors
- Kaizen (Pue Kim & Keng Kwang)
- TTSH (Sis Alicia, Sis Linda, Chin Ngik Mien, Edmund, Violet)

Registration
- Fong Siew, Jainah, Dewi, Theresa

Admission
- Yati, Junaidah

Intra-Op
- Ching Yee, Claudette, Randy, Catherine

Anesthetic Unit
- Petrina, Yati

Recovery
- Mei Mei, XuLan, Arvin

Data Collection & Analysis
- Joelle Lee, Lynn Yeo, Elizabeth Wong
THANK YOU